



# RELOADERS' GUIDE

"The  
Choice  
of  
Champions"



2002 Edition

Technical Assistance: 800-276-9337

[www.alliantpowder.com](http://www.alliantpowder.com)

\$2.50

## Alliant Champions (Shown On Cover)



**Jerry Miculek, Princeton, Louisiana**  
**Handgun Champion**

Uses Alliant Bullseys, American Select, Power Pistol

- . 9-time International Revolver Champion
- . 7-time USPSA Revolver Champion
- . 5-time Second Chance Bowling Pin Champion
- . 6-time American Handgunner World Shootoff Revolver Champion
- . 4-time USPSA 3-Gun Champion
- . ESPN .22 Rifle Champion
- . 1<sup>st</sup> Place International 3-Gun Champion
- . Speed Shooting Record Holder
- 8 shots in one second
- 6 shots, reload, 6 shots in 2.99 seconds
- 2 shots in each of 4 targets in 1.03 seconds.



**John Hildreth, Spencer, West Virginia**  
**Long Range Rifle Champion**

Uses Alliant Reloder 22

- . Official New Light Gun Record Holder
- . IBS 1000 Yard Match
- . 5 shots group in 1.603 inches



**Kay Ohye, East Brunswick, New Jersey**  
**Champion Trapshooter**

Uses Alliant Red Dot and Green Dot

- . All-American Trap Team 31 times
- . All-American Team Captain 3 times
- . Shot 200 Straights on 134 occasions
- . 6 All-Around Average Awards
- . Annually averaged .995 or more 14 times



**Deborah Ohye, East Brunswick, New Jersey**  
**Champion Trapshooter**

Uses Alliant Red Dot

- . Winner Of 38 Grand American trophies, 112 Satellite Grand trophies, 60 Eastern Zone trophies, 69 New Jersey state trophies and 194 State Shoot trophies other than New Jersey.
- . The only woman to achieve a Grand Slam (200 x 200 16 yard targets, 100 x 100 handicap targets from 27 yards and 100 x 100 in doubles).
- . Women's All America Captain 3 times; named to team 12 times.
- . The only woman to win the Westy Hogan Challenge Cup, and she did it two times.
- . Inducted into the Eastern United States Trapshooting Hall of Fame



## Our Mission: PREMIUM PERFORMANCE, CONSISTENT QUALITY.

Every container of Alliant smokeless powder is backed by a century of manufacturing experience, and the most exacting quality control procedures in the industry. We check and control chemical composition, the shape and size of powder grains, even the propellants' density and porosity. We send samples of every batch to our ballistics lab, testing, among other things, for burning speed. Then, after blending batches together for exactly the right ballistic characteristics, we use our advanced computerized equipment to test again.

The result: a line of products known and respected for consistent quality and performance— not only in the lab, but especially on the firing line. One of the reasons you're a reloader, after all, is so you'll know exactly what to expect every time you pull the trigger. With Alliant powders you will. Not only shell after shell, but also year after year.



# TABLE OF CONTENTS

	<u>PAGE</u>
Alliant Message .....	3
Table of Contents .....	4
Contact Information / Conditions & Disclaimers .....	5-6
Shotshell Reloading Data .....	7-34
10-Gauge Loads .....	7
12-Gauge Loads	
Cheddite 2-3/4" Shells .....	7
Federal 2-3/4" Shells .....	7-12
Fiocchi 2-3/4" Shells .....	12-13
Remington-Peters 2-3/4" Shells .....	14-16
Winchester-Western 2-3/4" Shells .....	17-20
3" Shells .....	20-21
3-1/2" Shells .....	21-22
16-Gauge Loads - 2-3/4" Shells .....	22-23
20-Gauge Loads - 2-3/4" Shells .....	23-26
28-Gauge Loads - 2-3/4" Shells .....	26
410 Bore Loads - 2-1/2" and 3" Shells .....	27
Promo Reloading Data - 12-Gauge 2-3/4" Shells .....	28
International Target Loads - 12-Gauge 2-3/4" Shells .....	29-30
"Steel" Non-Toxic Hunting Loads .....	31-32
Buckshot and Rifled Slug Loads .....	33-34
Pistol Reloading Data .....	35-37
Cowboy Action Loads .....	38
Silhouette Data .....	39
Centerfire Reloading Data .....	40-46
Handloading Precautions and Technical Data .....	48-49
Powder Information .....	49
Important Safety and Health Precautions .....	50
Reference Tables .....	50-51
Ballistic Data and Special Notes Regarding Components .....	51
Black Powder Warning .....	51
Powder Bushing Charts .....	52
Properties and Storage of Smokeless Powder .....	53-54
Some Publications on Reloading .....	55

## CAUTION

Millions of men and women reload ammunition as a hobby, or because the cost savings allow them to enjoy shooting more often. You should always reload so that the safest and most accurate loads on the shooting line will be yours, and always remember that to become or to continue to be a safe reloader, ***you must be careful at all times.*** As a reloader, you are dealing with and manufacturing explosive materials; handling powders and primers that can, if misused, explode or burn, causing property damage, serious personal injury—even death! Later, when you shoot the ammunition you've produced and checked, you will be the person closest to the gun, the one most likely to be injured if improperly loaded ammunition causes your gun to malfunction.

***Protect yourself by studying books that describe safe reloading techniques in detail. When using smokeless powders, use only the exact type and quantity described herein. Always store and use your smokeless powders in accordance with the guidelines listed in this booklet.***

## POWDER WARNINGS

- **NEVER** substitute smokeless powder for black powder, or for black powder substitutes.
- **NEVER** mix together any two powders, regardless of type, brand, style, or source.
- **NEVER** use the data in this Reloaders' Guide for any other powders, even if advertised "similar to Bullseye" or "burns the same as Red Dot," etc.

***Violation of any of the above could result in severe personal injury (including death) or gun damage.***

## WARNING — BE SURE TO:

- **The powder charge weights listed in our data tables are maximum.** For rifle and pistol loads, the maximum powder charge should be reduced by 10% to establish a minimum or starting powder charge.
- All loads have been tested in our ballistics lab with SAAMI approved, un-vented test barrels. Keep in mind that such test equipment often yields higher velocities than are usually obtained with sporting arms.
- If ever you are unsure of your load data, or if you detect any signs of high pressure while using load data from this Guide, stop loading or testing at once. Contact our technical service personnel at 800-276-9337 before proceeding.

## BALLISTICS

The ballistic data shown in this booklet were obtained in the laboratory under strictly controlled conditions. ***You must load only the exact combinations that are listed.*** Even then, different reloading techniques, plus industrial tolerances of each component, likely will cause your ammunition, or ammunition loaded by other competent laboratories, to yield slightly different ballistic data. Therefore, ***powder charge recommendations in this booklet must never be exceeded.***

Safe shooters and hunters know that accuracy, not maximum power, is their key to success.

## FOR TECHNICAL ASSISTANCE

For Technical Assistance or for any information not included in this Reloaders' Guide, please call 1-800-276-9337.

For our interactive Reloaders' Guide on the Web, click onto [www.alliantpowder.com](http://www.alliantpowder.com).

Our e-mail address is: [alliant\\_reloading@atk.com](mailto:alliant_reloading@atk.com)

## DISCLAIMER

Alliant disclaims any warranties with respect to this product, the safety or suitability thereof, or the results obtained, whether express or implied, including, without limitation, any implied warranty of merchantability or fitness for a particular purpose and/or any other warranty. Buyers and users assume all risk, responsibility, and liability whatsoever for any and all injuries (including death), losses, or damages to persons or property arising from the use of this product, whether or not occasioned by seller's negligence or based on strict product liability or principles of indemnity or contribution.

Alliant neither assumes nor authorizes any person to assume for it any liability in connection with the use of this product.



# SHOTSHELL RELOADING DATA

## 0-Gauge, 3 1/2 inch Fed. Plastic with Paper Wad Base

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercu Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
1 1/4	1,265	CCI 209M	Rem. SP10			29.5 8.3				
		Win. 209	Rem. SP10			29.0 8.8				
1 5/8	1,285	CCI 209M	Rem. SP10					36.0 10.3	45.0 8.0	
		Win. 209	Rem. SP10						45.5 8.3	
1 7/8	1,270	CCI 209M	Rem. SP10						45.5 9.9	
		Win. 209	Rem. SP10						45.5 10.2	
2	1,210	CCI 209M	Rem. SP10						43.5 9.2	
		Win. 209	Rem. SP10						44.0 9.4	
2 1/4	1,165	CCI 209M	Rem. SP10						42.0 9.8	
		Win. 209	Rem. SP10						42.5 10.2	

## 0-Gauge, 3 1/2 inch Rem. SP Shell

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercu Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
1 1/4	1,265	CCI 209M	Rem. SP10			28.5 8.8	31.0 7.5			
		Win. 209	Rem. SP10			29.0 8.8	31.0 7.6			
1 5/8	1,285	CCI 209M	Rem. SP10						43.5 8.5	
		Win. 209	Rem. SP10						44.0 8.5	
1 7/8	1,270	CCI 209M	Rem. SP10						44.0 9.8	
		Win. 209	Rem. SP10						44.5 9.1	
2	1,210	CCI 209M	Rem. SP10						42.0 10.4	
		Win. 209	Rem. SP10						42.5 10.1	
2 1/4	1,165	CCI 209M	Rem. SP10						40.5 10.4	
		Win. 209	Rem. SP10						41.0 10.5	

## 0-Gauge, 3 1/2 inch Win. Polyformed with Plastic Base Wad

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercu Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
1 1/4	1,265	CCI 209M	Rem. SP10			28.0 8.5				
		Win. 209	Rem. SP10			28.5 8.6				
1 5/8	1,285	CCI 209M	Rem. SP10					35.5 10.4	44.5 8.7	
		Win. 209	Rem. SP10						45.0 8.8	
1 7/8	1,270	CCI 209M	Rem. SP10						45.0 9.8	
		Win. 209	Rem. SP10						45.5 10.2	
2	1,210	CCI 209M	Rem. SP10						43.0 9.4	
		Win. 209	Rem. SP10						43.5 9.5	
2 1/4	1,165	CCI 209M	Rem. SP10						41.5 10.5	
		Win. 209	Rem. SP10						42.0 10.5	

## 2-Gauge, 2 3/4 inch Cheddite Plastic Hull

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercu Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
1	1,200	Cheddite	Fed. 12SO	19.0 7.8	20.0 6.2	21.5 6.9				
1	1,255	Cheddite	Fed. 12SO	20.0 8.7	21.5 7.0	23.0 7.8				
1	1,290	Cheddite	Fed. 12SO	21.0 9.3		24.0 8.3				
1	1,300	Cheddite	Fed. 12SO		22.5 7.6					
1 1/8	1,145	Cheddite	Fed. 12S3	18.0 9.0	19.0 7.6	20.0 7.5				
			Rem. RXP12	18.0 8.5	19.5 7.2	20.5 7.1				
1 1/8	1,200	Cheddite	Fed. 12S3	19.5 9.6	20.5 8.8	21.5 8.3				
			Rem. RXP12	19.5 8.8	20.5 7.6	22.0 7.8				

## 2-Gauge, 2 3/4 inch Fed. Gold Medal Plastic Target Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercu Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
7/8	1,200	Fed. 209A	Fed. 12SO	17.5 7.6						
			Purple PC	17.0 6.4						

# 12-Gauge, 2 3/4 inch Fed. Gold Medal Plastic Target Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100		American Select Grains Approx. x100		Green Dot Grains Approx. x100		Unique Grains Approx. x100		Herco Grains Approx. x100		Blue Dot Grains Approx. x100		2400 Grains Approx. x100	
Cont. from Prev. Page: Velocity - 1,200 • Shot Wt. - 7/8																	
7/8	1,250	Fed. 209A	Rem. TGT 12	17.5	7.1												
			Win. WAA12SL	17.0	7.3												
			Fed. 12SO	19.0	7.9												
			Purple PC	18.5	7.3												
			Rem. TGT 12	18.5	7.8												
7/8	1,300	Fed. 209A	Win. WAA12SL	18.0	8.0												
			Claybuster 1100-12			21.5	6.9										
			Fed. 12SO	19.5	8.4	21.0	7.3	22.0	7.5								
			Purple PC	19.5	7.9	21.5	6.9	22.5	7.0								
			Rem. TGT 12	19.5	8.5	21.0	7.4	22.0	7.2								
1	1,200	Fed. 209A	Win. WAA12SL	19.0	8.4			21.5	7.6								
			Claybuster 1100-12			20.0	7.3										
			Fed. 12SO	18.0	8.3	19.5	7.1	20.5	7.6								
			Purple PC	18.0	7.4			20.5	7.3								
			Rem. TGT 12	18.0	7.9	19.5	7.5	20.0	7.0								
1	1,255	Fed. 209A	Win. WAA12SL	18.0	8.7	19.5	7.2	20.0	7.8								
			Claybuster 1100-12			21.0	7.6										
			Fed. 12SO	19.5	9.3	21.0	7.7	21.5	8.6								
			Purple PC	19.5	8.7			21.5	8.0								
			Rem. TGT 12	19.0	8.7	20.5	8.1	21.5	7.9								
1	1,290	Fed. 209A	Win. WAA12SL	18.5	9.1	21.0	8.4	21.5	8.5								
			Claybuster 1100-12			21.5	8.0										
			Fed. 12SO	20.5	10.3	22.0	8.5	22.5	8.7								
			Purple PC	20.5	9.3			22.5	8.3								
			Rem. TGT 12	20.0	9.1	21.5	8.8	22.5	8.5								
1 1/8	1,000	Fed. 209A	Win. WAA12SL	20.0	10.3	21.5	8.8	22.5	9.0								
			Fed. 12S3	14.0	7.5	15.0	6.3										
			CCI 209M	17.0	8.3												
			Fed. 209A			17.5	7.1										
			Claybuster 3118-12			17.5	7.1										
1 1/8	1,145	Fed. 209A	Fed. 12S3	17.0	8.4			18.5	7.8								
			Fiocchi FTW1	16.5	8.5			18.0	7.8								
			Hornady Versalite	17.0	8.6	17.0	8.1	18.0	7.2								
			Rem. Fig. 8	17.0	7.7	17.5	8.0	18.0	7.0								
			Win. WAA12 (White)	16.5	8.5	17.5	7.4	18.0	7.7								
			Win. WAA12SL	17.0	8.1			18.0	7.6								
			Win. WT12 (Orange)			18.0	7.7										
			Windjammer	17.5	7.6			18.5	6.6								
			Fio. 616	17.5	8.2												
			Win. 209	17.0	8.4												
			CCI 209	18.0	8.2			19.0	7.8								
			CCI 209M	18.0	8.6			19.5	7.5								
			CCI 209SC	19.0	9.8	18.5	8.5	20.5	8.6								
			Rem. Fig. 8	19.5	9.5			21.0	8.3								
			Win. WAA12 (White)	18.5	10.2			20.5	9.0								
1 1/8	1,200	Fed. 209A	Claybuster 3118-12			19.0	8.2										
			Fed. 12S3	18.0	8.8	19.0	7.6	19.5	8.1								
			Fiocchi FTW1	18.0	9.6			19.5	8.6								
			Hornady Versalite	18.0	9.4	18.5	9.6	19.0	8.0								
			Rem. Fig. 8	18.0	8.8	19.0	9.0	19.0	7.7								
			Rem. RXP12	18.0	9.4			19.0	8.0								
			Win. WAA12 (White)	17.5	9.4	19.0	9.6	19.0	8.2								
			Win. WAA12SL	18.0	9.2			19.0	8.2								
			Win. WT12 (Orange)	18.5	9.3	19.0	9.3	20.0	8.4								
			Windjammer	18.5	8.2	19.0	8.7	19.5	7.7								
			Rem. 209P	18.5	8.2	19.5	7.8	20.5	6.8								
			Win. 209	17.5	9.6	19.5	8.1	19.5	8.0								
			CCI 209	20.0	9.8			22.0	9.2	24.0	8.3						
			CCI 209M	19.0	8.9			21.0	8.6	23.5	8.0						
			CCI 209SC	20.5	10.7	20.5	10.0	22.5	8.9								
Rem. Fig. 8	21.0	9.8			23.0	9.2											
Win. WAA12 (White)	20.0	10.5			22.0	10.2											
1 1/8	1,200	Fed. 209A	Claybuster 3118-12			20.5	9.6										
			Fed. 12S3	19.5	10.0	20.5	9.2	20.0	9.0	22.5	7.3						
			Fiocchi FTW1	19.0	10.5			20.5	9.3	22.5	8.1						
			Hornady Versalite	19.0	10.1	20.0	10.9	20.5	9.4	22.0	8.0						
			Rem. Fig. 8	19.0	9.5	20.0	10.3	20.0	8.6	22.5	7.3						
			Rem. RXP12	19.0	9.9			20.0	8.8	22.5	7.8						
			Win. WAA12 (White)	19.0	10.4	20.5	9.4	20.0	9.2	22.5	8.1						
			Win. WAA12SL	19.0	10.0			20.0	8.8								
			Win. WT12 (Orange)	20.0	10.4	20.5	10.4	21.5	8.8	23.5	8.3						
			Windjammer	19.5	9.6	20.5	9.8	21.0	8.2	22.5	6.9						
			Rem. 209P	19.5	9.3	21.5	9.0	21.5	7.9	24.0	6.9						
			Win. 209	19.0	10.5	20.5	9.9	20.5	9.0	23.0	8.6						

## 2-Gauge, 2 3/4 inch Fed. Gold Medal Plastic Target Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot		American Select		Green Dot		Unique		Hercu		Blue Dot		2400	
				Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.
				x100		x100		x100		x100		x100		x100		x100	
nt. from Prev. Page: Velocity - 1,250 • Shot Wt. - 1 1/8																	
1 1/8	1,250	CCI 209M	Fed. 12S3					22.5	9.8	24.0	9.1						
		Fed. 209A	Claybuster 3118-12			22.0	10.6										
			Fed. 12S3			22.0	10.1										
			Hornady Versalite	20.0	10.7	21.0	10.9	21.5	9.0	24.0	8.3	26.0	8.2				
			Rem. Fig. 8	20.0	9.5			22.0	9.2	23.5	7.8	26.0	7.7				
			Rem. RXP12	20.0	10.1			21.5	9.7	23.5	8.4	26.0	8.0				
			Win. WAA12 (White)					21.5	9.4	23.0	8.4	26.0	8.3				
			Windjammer	20.5	9.5	21.5	10.7	22.5	8.4	24.0	7.7	26.0	7.4				
		Rem. 209P	Fed. 12S3					23.0	8.8	25.0	7.6						
		Win. 209	Fed. 12S3					22.5	10.5	24.0	9.8						
1 1/8	1,310	Fed. 209A	Hornady Versalite							25.0	10.0						
			Rem. RXP12					24.0	10.4	26.0	10.3						
			Win. WAA12 (White)					23.0	10.4	25.0	9.2						
			Windjammer					24.0	8.8	25.0	9.7						
1 1/8	1,400	Fed. 209A	Win. WAA12F114									30.0	10.5				
1 1/8	1,440	Fed. 209A	Red PC									32.0	10.5				
1 1/4	1,205	CCI 209M	Rem. RP12											34.0	9.4		
		Fed. 209A	Rem. RP12											34.0	9.7		
		Rem. 209P	Rem. RP12											35.5	8.1		
		Win. 209	Rem. RP12											34.5	9.9		
1 1/4	1,220	CCI 209M	Fed. 12S4							24.5	9.5	25.5	8.7				
		Fed. 209A	Fed. 12S4					24.0	10.5	25.0	10.2						
			Rem. SP12					24.0	10.4	26.0	9.7						
			Win. WAA12F114					24.0	10.6	25.0	10.1						
		Rem. 209P	Fed. 12S4					25.0	9.8	25.5	8.1						
		Win. 209	Fed. 12S4					24.0	9.5	25.5	9.4						
1 1/4	1,275	CCI 209M	Fed. 12S4											35.0	9.1		
		Fed. 209A	Fed. 12S4											34.0	8.9		
			Rem. SP12									27.0	10.1				
			Win. WAA12F114									27.0	10.5				
		Rem. 209P	Fed. 12S4									27.5	9.2				
		Win. 209	Fed. 12S4											35.0	8.7		
1 1/4	1,300	Fed. 209A	Win. WAA12F114									28.0	10.8				
1 1/4	1,310	Fed. 209A	Red PC									29.0	10.0				
1 1/4	1,330	CCI 209M	Rem. SP12											37.5	8.3		
		Fed. 209A	Rem. SP12											35.0	10.5		
		Win. 209	Rem. SP12											37.0	9.0		
1 1/4	1,440	Fed. 209A	Rem. RP12											40.5	10.7		
1 3/8	1,240	CCI 209M	Rem. RP12											35.0	8.6		
		Fed. 209A	Rem. RP12											34.0	9.9		
		Rem. 209P	Rem. RP12											36.0	7.8		
		Win. 209	Rem. RP12											34.5	8.6		
1 3/8	1,295	CCI 209M	Rem. RP12											36.5	9.0		
		Fed. 209A	Rem. RP12											35.5	10.7		
		Rem. 209P	Rem. RP12											39.0	8.6		
		Win. 209	Rem. RP12											36.0	9.2		
1 1/2	1,150	Fed. 209A	Rem. RP12									25.5	10.1	33.5	8.3		

## 2-Gauge, 2 3/4 inch Fed. Hi Power Plastic Shells with Rolled Paper Base Wad

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot		American Select		Green Dot		Unique		Hercu		Blue Dot		2400	
				Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.
				x100		x100		x100		x100		x100		x100		x100	
1	1,290	Fed. 209A	Fed. 12S3	21.0	9.4			23.0	7.5								
			Rem. R12L	20.5	8.5			22.5	7.4								
1 1/8	1,145	CCI 209M	Fed. 12S3	18.5	8.6			20.0	7.6								
		Fed. 209A	Fed. 12S3	18.5	7.3			20.0	7.2								
			Hornady Versalite	18.5	8.3			19.5	7.1								
			Rem. RXP12	18.5	8.7			19.0	8.7								
			Win. WAA12 (White)	18.5	9.6			18.5	9.1								
		Rem. 209P	Fed. 12S3	18.5	8.4			21.0	6.7								
		Win. 209	Fed. 12S3	18.5	9.1			20.0	8.2								
1 1/8	1,200	CCI 209M	Fed. 12S3	20.0	9.3			21.5	8.6	24.0	7.7						
		Fed. 209A	Fed. 12C1					20.5	9.4								
			Fed. 12S3	19.0	9.3			21.0	8.0	23.0	7.7						
			Hornady Versalite	19.5	9.0			20.0	8.8	22.5	8.0						
			Rem. RXP12	19.5	9.3			20.5	9.1	22.0	8.1						
			Win. WAA12 (White)	19.0	9.8			20.0	9.3	21.0	7.7						
		Rem. 209P	Fed. 12S3	20.0	9.2			22.0	7.6								
		Win. 209	Fed. 12S3	19.5	9.5			21.5	8.9	23.5	8.1						
1 1/8	1,255	CCI 209M	Fed. 12S3	21.5	10.1			22.0	9.6	25.5	8.4						

# 12-Gauge, 2 3/4 inch Fed. Hi Power Plastic Shells with Rolled Paper Base Wad

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercu Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
----------------------	----------	--------	-----	-----------------------------------	---	-------------------------------------	----------------------------------	---------------------------------	------------------------------------	--------------------------------

Cont. from Prev. Page: Velocity - 1,255 • Shot Wt. - 1 1/8

1 1/4	1,220	Fed. 209A	Fed. 12C1	21.0	10.2	22.0	10.1	24.0	8.1		
			Fed. 12S3	21.5	10.1						
			Hornady Versalite	20.5	9.7						
			Rem. RXP12	21.0	9.8						
			Win. WAA12 (White)								
		Rem. 209P	Fed. 12S3	22.0	10.3	23.0	8.5				
		Win. 209	Fed. 12S3	21.5	10.7	23.0	9.4	25.0	9.1		
		CCI 209M	Fed. 12S4					25.0	10.0		
		Fed. 209A	Fed. 12C1					23.0	9.0		
			Fed. 12S4			23.0	9.8	23.0	9.5		
1 1/4	1,330	Fed. 209A	Hornady Versalite			23.0	9.7	23.5	8.8		
			Rem. R12H			22.0	10.5				
			Rem. RXP12			22.0	9.6	23.0	8.3		
			Win. WAA12 (White)			21.5	9.5	23.0	9.6		
			Win. WAA12F114			23.0	9.9	23.0	9.4		
		Rem. 209P	Fed. 12S4					25.5	9.0		
		Win. 209	Fed. 12S4					25.0	9.5		
		CCI 209M	Fed. 12S4								
		Fed. 209A	Fed. 12C1					25.5	10.2	30.0	9.5
			Fed. 12S4					29.0	10.2		
1 3/8	1,295	Fed. 209A	Rem. SP12					25.5	10.2	28.5	9.8
			Win. WAA12 (White)					28.5	9.9		
			Win. WAA12F114					29.0	10.5		
								29.5	9.4		
		Win. 209	Fed. 12S4					30.0	10.2	38.0	8.6
		CCI 209M	Rem. RP12							39.0	8.5
		Fed. 209A	Rem. RP12							38.5	8.6
			Rem. SP12							38.0	9.0
			Win. WAA12 (White)							37.5	8.5
		Rem. 209P	Rem. RP12							39.0	8.4
1 3/8	1,350	Fed. 209A	Win. 209							39.0	9.4
			CCI 209M	Rem. RP12						39.5	9.6
			Fed. 209A	Rem. RP12						39.5	9.7
			Win. 209	Rem. RP12						40.0	9.6
			Fed. 209A	Rem. RP12						33.5	8.4
			Rem. SP12					26.5	8.9		
		CCI 209M	Rem. RP12							35.0	8.7
		Fed. 209A	Rem. RP12							34.5	8.5
		Win. 209	Rem. RP12							34.5	8.6
		CCI 209M	Rem. RP12							37.0	9.5
1 1/2	1,260	Fed. 209A	Rem. RP12							36.0	9.5
			Rem. SP12							37.0	9.6
			Win. 209	Rem. RP12						37.0	9.9
		CCI 209M	Rem. RP12								
		Fed. 209A	Rem. RP12								
		Win. 209	Rem. RP12								

## 12-Gauge, 2 3/4 inch Fed. One-Piece Plastic Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercu Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
----------------------	----------	--------	-----	-----------------------------------	---	-------------------------------------	----------------------------------	---------------------------------	------------------------------------	--------------------------------

1 1/4	1,220	CCI 209M	Fed. 12S4				25.5	9.2	26.0	8.9	
			Fed. 209A				25.0	9.1	26.0	8.4	
			Rem. SP12				25.5	8.7	26.5	7.8	
			Win. WAA12F114				25.0	8.7	26.0	8.0	
		Win. 209	Fed. 12S4				25.0	9.2	26.0	8.5	
		CCI 209M	Fed. 12S4						27.5	9.5	
		Fed. 209A	Fed. 12S4						28.0	9.5	
			Rem. SP12						27.5	8.2	
			Win. WAA12F114						27.5	8.7	
		Win. 209	Fed. 12S4						27.5	9.0	
1 1/4	1,330	CCI 209M	Fed. 12S4								
			Fed. 12S4								
			Win. WAA12F114								
		Win. 209	Fed. 12S4								
		CCI 209M	Rem. SP12								
		Fed. 209A	Rem. SP12								
		Win. 209	Rem. SP12								
		CCI 209M	Rem. RP12								
		Fed. 209A	Rem. RP12								
		Win. 209	Rem. RP12								
1 3/8	1,240	CCI 209M	Fed. 12S4								
			Fed. 12S4								
			Win. WAA12F114								
		Win. 209	Fed. 12S4								
		CCI 209M	Rem. SP12								
		Fed. 209A	Rem. SP12								
		Win. 209	Rem. SP12								
		CCI 209M	Rem. RP12								
		Fed. 209A	Rem. RP12								
		Win. 209	Rem. RP12								
1 1/2	1,150	CCI 209M	Fed. 12S4								
			Fed. 12S4								
			Rem. SP12								
		Win. 209	Rem. SP12								
		CCI 209M	Rem. RP12								
		Fed. 209A	Rem. RP12								
		Win. 209	Rem. RP12								
		CCI 209M	Fed. 12S4								
		Fed. 209A	Fed. 12S4								
			Rem. SP12								

2-Gauge, 2 3/4 inch Fed. One-Piece Plastic Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercu Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
t. from Prev. Page: Velocity - 1,150 • Shot Wt. - 1 1/2										
1 1/2	1,205	Fio. 616	Fed. 12S4					26.0	10.1	
		Rem. 209P	Fed. 12S4					26.5	9.9	
		Win. 209	Fed. 12S4					26.5	10.1	
		CCI 209M	Rem. RP12							36.0 8.5
		Fed. 209A	Rem. RP12							36.0 8.8
1 1/2	1,260		Rem. RP12							38.0 9.9
		Win. 209	Rem. RP12							37.0 8.5
		CCI 209M	Rem. RP12							38.0 10.0
		Win. 209	Rem. RP12							38.0 9.1
1 5/8	1,115	CCI 209M	Rem. SP12					26.5	10.0	
		Fed. 209A	Rem. SP12					26.5	10.0	
		Fio. 616	Rem. SP12					26.0	10.3	
		Rem. 209P	Rem. SP12					26.5	9.5	
		Win. 209	Rem. SP12					26.5	9.8	

2-Gauge, 2 3/4 inch Fed. Paper Target Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot		American Select		Green Dot		Unique		Hercu		Blue Dot		2400	
				Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.
				x100		x100		x100		x100		x100		x100		x100	
1	1,290	CCI 209M	Fed. 12S3	21.0	8.7			23.0	7.8								
		Fed. 209A	Fed. 12S3	20.5	9.0			23.5	9.4								
			Fed. 12S3	20.5	10.4			22.5	9.2								
			Rem. R121	20.0	9.3			21.5	8.8								
			Fed. 12C1	18.5	7.9			20.0	7.4								
1 1/8	1,145	CCI 209M	Fed. 12S3			19.0	8.6										
		CCI 209SC	Claybuster			19.0	7.6										
		Fed. 209A	Fed. 12C1	18.0	8.5			19.0	8.2								
			Fed. 12S3	18.0	8.7	19.0	8.2	19.5	7.4								
			Fiocchi FTW1	18.5	9.0			20.0	7.9								
			Hornady Versalite	18.0	8.8	19.0	7.9	19.5	6.9								
			Lage Uniwad	18.0	8.5			19.0	8.4								
			Red PC	18.0	8.3			20.0	7.6								
			Rem. Fig. 8			19.0	7.6										
			Rem. R12L	18.5	9.3			19.0	8.0								
			Rem. RXP12	18.0	8.9			18.5	8.1								
			Win. WAA12 (White)	18.0	8.6	19.0	8.4	18.5	8.0								
			Win. WT12 (Orange)			19.0	8.1										
			Windjammer	18.5	8.2	19.5	7.1	20.5	6.6								
		Rem. 209P	Fed. 12C1	18.5	8.3			20.0	7.0								
			Fed. 12S3			19.0	8.5										
		Win. 209	Fed. 12C1	18.5	8.6			19.5	7.5								
			Fed. 12S3			19.0	8.9										
	1,200	CCI 209M	Fed. 12C1	20.0	8.7			21.5	7.7	24.0	7.2						
		CCI 209SC	Fed. 12S3			20.5	9.8										
		Fed. 209A	Claybuster			20.5	9.3										
			Fed. 12C1	19.0	9.3			20.0	8.6	22.0	8.2						
			Fed. 12S3	19.0	9.8	20.5	10.4	21.0	7.8	22.0	7.2						
			Fiocchi FTW1	19.5	9.5			21.0	8.2								
			Hornady Versalite	19.0	8.9	20.0	10.1	21.0	8.3	22.0	7.9						
			Lage Uniwad	18.5	9.4			20.0	8.8	22.0	8.0						
			Red PC	19.0	10.3			21.0	8.8	22.5	8.4						
			Rem. Fig. 8			20.0	9.8										
			Rem. R12H	19.0	9.2			19.5	8.8								
			Rem. R12L	19.5	9.5			20.0	8.6	22.0	7.8						
			Rem. RXP12	19.0	9.9			20.0	8.6	21.0	8.0						
			Win. WAA12 (White)	19.0	10.5	20.5	10.4	19.5	9.0	21.0	8.6						
			Win. WT12 (Orange)			20.5	10.2										
			Windjammer	19.0	8.7	20.0	9.1	22.0	7.7	23.5	7.6						
		Rem. 209P	Fed. 12C1	20.0	9.2			22.0	7.8	24.0	7.0						
			Fed. 12S3			21.0	9.7										
		Win. 209	Fed. 12C1	19.5	9.8			21.0	8.1	23.0	7.6						
			Fed. 12S3			20.5	9.7										
1 1/8	1,255	CCI 209M	Fed. 12C1	21.0	10.5			22.5	8.5	24.5	8.4						
		Fed. 209A	Fed. 12C1	21.0	10.2			21.5	7.9	22.5	8.9						
			Fed. 12S3	21.0	9.4			23.0	9.1	23.0	8.3						
			Hornady Versalite	20.5	9.9			22.5	8.5	23.0	8.7						
			Red PC	20.5	10.7			22.5	9.6	24.5	8.5						
			Rem. R12H					21.5	9.9	22.5	9.0						
			Rem. RXP12	21.0	10.0			21.5	9.3	22.0	8.5						
			Win. WAA12 (White)					21.5	10.5	22.0	9.5						

## 12-Gauge, 2 3/4 inch Fed. Paper Target Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercos Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
Cont. from Prev. Page Velocity - 1,255 • Shot Wt. - 1 1/8										
1 1/8	1,310	Rem. 209P	Fed. 12C1	21.5	10.7	23.5	7.5	26.0	7.5	
		Win. 209	Fed. 12C1	21.0	10.3	22.5	9.0	24.5	8.3	
		CCI 209M	Fed. 12C1					26.5	9.4	
		Fed. 209A	Fed. 12C1			24.5	9.9	26.5	9.0	
			Fed. 12S3					26.5	9.7	
1 1/8	1,400	Rem. RXP12				24.5	9.8	26.5	8.6	
		Win. WAA12 (White)				24.5	9.7	26.5	9.1	
		Rem. 209P	Fed. 12C1			25.5	9.3	27.5	8.3	
		Win. 209	Fed. 12C1					26.5	9.2	
		Fed. 209A	Win. WAA12F114					30.0	10.7	
1 1/4	1,220	CCI 209M	Fed. 12S4			23.0	10.5	25.5	9.7	
1 1/4	1,330	Fed. 209A	Fed. 12C1			21.0	10.6	22.5	9.5	
			Fed. 12S4			23.0	10.5	24.0	9.8	
			Hornady Versalite			23.0	9.6	23.0	8.8	
		Rem. SP12				21.0	9.6	22.0	9.6	
		Win. WAA12 (White)				21.0	10.5	22.0	10.0	
1 1/4	1,330	Win. WAA12F114				23.0	9.9	23.5	9.5	
		Rem. 209P	Fed. 12S4			23.0	9.9	25.5	9.1	
		Win. 209	Fed. 12S4					24.5	10.6	
		CCI 209M	Fed. 12S4					28.0	10.7	29.5 9.9
		Fed. 209A	Fed. 12S4							37.0 9.0
1 1/4	1,400	Rem. RP12						29.0	9.4	37.0 10.3
		Rem. SP12						29.5	9.3	
		Win. WAA12F114						29.5	9.2	
		Win. 209	Fed. 12S4							37.5 10.3
		Fed. 209A	Rem. RP12							39.0 10.5
1 3/8	1,240	CCI 209M	Rem. SP12							34.5 9.5
1 3/8	1,295	Fed. 209A	Rem. SP12							34.0 9.9
		Rem. 209P	Rem. SP12							36.0 8.3
		Win. 209	Rem. SP12							34.5 9.5
		CCI 209M	Rem. SP12							37.0 10.6
		Fed. 209A	Rem. SP12							35.5 10.3
1 3/8	1,350	Rem. 209P	Rem. SP12							38.0 8.6
1 1/2	1,150	Win. 209	Rem. SP12							36.5 10.2
1 1/2	1,205	Fed. 209A	Rem. RP12							37.5 10.7
1 1/2	1,205	Fed. 209A	Rem. RP12							32.5 8.8
		Rem. SP12						25.0	10.2	
		CCI 209M	Rem. RP12							35.0 9.4
		Fed. 209A	Rem. RP12							34.0 9.3
		Rem. 209P	Rem. RP12							34.5 10.3
		Win. 209	Rem. RP12							35.0 9.6

## 12-Gauge, 2 3/4 inch Fiocchi Plastic Target Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercos Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
7/8	1,200	Fio. 616	Fed. 12SO	17.5	6.7					
7/8	1,250	Fio. 616	Purple PC	17.5	6.4					
			Rem. TGT 12	17.0	6.9					
			Win. WAA12SL	17.0	6.7					
			Fed. 12SO	19.0	6.9					
			Purple PC	19.0	6.7					
7/8	1,300	Fio. 616	Rem. TGT 12	18.5	7.0					
			Win. WAA12SL	18.5	6.8					
			Fed. 12SO	19.5	8.8					
			Purple PC	20.0	8.6	22.5	7.7			
			Rem. TGT 12	20.0	7.9	22.0	7.6			
1	1,200	Fio. 616	Win. WAA12SL	20.0	8.1	22.0	7.9			
			Fed. 12SO	18.0	9.1	20.0	8.1			
			Purple PC	18.0	8.1	20.0	7.2			
			Rem. TGT 12	18.0	8.5	20.0	7.4			
			Win. WAA12SL	18.0	8.5	20.0	7.9			
1	1,255	Fio. 616	Purple PC	19.0	9.5	21.0	8.2			
			Rem. TGT 12	19.0	9.3	21.0	8.4			
			Win. WAA12SL	19.0	9.5	21.0	8.1			
			Purple PC	21.0	9.8	23.0	8.4			
			Rem. TGT 12	20.5	10.1	22.5	8.6			
1 1/8	1,090	Fio. 616	Win. WAA12SL	20.5	10.3	22.5	9.4			
			Claybuster (Red)							
			Fed. 12C1		18.0 7.1	18.5	6.8			

2-Gauge, 2 3/4 inch Fiocchi Plastic Target Shells

Shot Wt. ounces	Velocity	Primer	Wad	Red Dot		American Select		Green Dot		Unique		Herco		Blue Dot		2400	
				Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.
				x100		x100		x100		x100		x100		x100		x100	
nt. from Prev. Page: Velocity - 1,090 • Shot Wt. - 1 1/8																	
1 1/8	1,145	Fio. 616	Fed. 12S3	16.0	8.4	17.5	7.4	18.5	7.2								
			Fiocchi FTW1	16.5	8.1			18.5	6.8								
			Fiocchi TL1			18.0	7.4										
			Hornady Versalite	16.5	8.1			18.5	7.1								
			Rem. Fig. 8	16.0	8.0			18.5	6.5								
			Rem. RXP12	16.5	8.7			18.5	6.7								
			Win. WAA12 (White)	17.0	7.6			18.5	7.0								
			Win. WAA12SL	17.0	7.3												
			Claybuster (Red)			19.5	8.0										
			Fed. 12C1	18.0	8.8			19.5	7.5								
			Fed. 12S3	18.0	9.2	19.0	8.7	20.0	7.5								
			Fiocchi FTW1	17.5	8.8			20.0	7.3								
			Fiocchi TL1			19.5	8.5										
			Hornady Versalite	17.5	9.0			19.5	7.5								
			Rem. Fig. 8	18.0	8.4			20.0	7.1								
1 1/8	1,200	Fio. 616	Rem. RXP12	18.0	8.7			20.0	7.2								
			Win. WAA12 (White)	18.0	9.0			20.0	7.6								
			Win. WAA. 2SL	18.0	8.3												
			Windjammer	18.5	7.4			19.5	7.2								
			Claybuster (Red)			21.0	9.0										
			Fed. 12C1	19.0	9.5			21.0	8.4	23.5	6.9						
			Fed. 12S3	19.0	9.7	20.5	9.4										
			Fiocchi FTW1	19.0	9.3			21.0	7.8	23.5	7.4						
			Fiocchi TL1			20.5	9.2										
			Hornady Versalite	18.5	9.5			21.0	8.2	24.0	7.1						
			Rem. Fig. 8	19.5	9.6			21.5	8.5	23.5	7.0						
			Rem. RXP12	19.5	9.7			21.5	7.9	22.5	7.2						
			Win. WAA12 (White)	19.5	9.4			21.5	8.1	23.5	6.8						
			Windjammer	20.0	8.6			21.0	7.7	24.0	6.4						
			Claybuster (Red)			22.5	10.7										
1 1/8	1,250	Fio. 616	Fed. 12C1	20.5	10.7			22.5	9.3	24.5	8.0	26.0	7.5				
			Fed. 12S3			22.0	10.3										
			Fiocchi FTW1	21.0	10.5			23.0	9.2	24.5	8.2	26.0	8.3				
			Fiocchi TL1			22.0	10.2										
			Hornady Versalite					22.5	9.3	25.0	7.8	25.5	7.7				
			Rem. Fig. 8	20.5	10.2			23.0	8.8	24.5	7.6	26.0	7.3				
			Rem. RXP12					23.0	9.2	23.5	8.2	26.0	7.5				
			Win. WAA12 (White)					23.0	8.9	25.0	7.8	26.0	7.9				
			Windjammer	21.0	9.4			22.5	9.0	25.5	6.9	26.5	7.7				
			Rem. RXP12					24.0	10.0	26.5	8.4						
			Fed. 12S3					25.0	9.6	27.0	8.6						
			Win. WAA12 (White)					25.0	8.1	26.5	8.3						
			CCI 209M					24.5	8.0								
			Fio. 616					23.0	9.7	25.0	8.8						
			Win. 209					23.0	10.0	25.0	8.7						
1 1/4	1,275	CCI 209M	Rem. SP12									28.0	8.3				
			Fio. 616									27.0	10.3	28.0	9.5		
			Win. 209									27.0	10.0	28.0	8.4		
			Win. WAA12F114														
			Rem. SP12									30.0	9.2	41.0	7.6		
1 1/4	1,300	CCI 209M	Fed. 12S4									30.0	9.5	40.0	8.3		
			Fio. 616									30.5	8.6	41.0	7.7		
			Rem. SP12									30.0	9.2	39.5	7.5		
			Win. WAA12F114									30.0	10.1	38.5	8.3		
			Win. 209											37.0	9.6		
1 3/8	1,295	CCI 209M	Rem. RP12											38.0	9.1		
			Fio. 616											38.0	9.5		
			Win. 209											40.0	10.1		
			Rem. RP12											40.0	9.9		
			Rem. RP12											32.5	8.7		
1 1/2	1,150	Fio. 616	Rem. RP12											33.0	9.5		
			CCI 209M											36.5	9.0		
			Fio. 616											35.5	8.6		
			Win. 209											36.5	10.6		
			Rem. RP12											37.5	9.6		
1 1/2	1,260	CCI 209M	Rem. RP12											36.5	10.3		
			Fio. 616														
			Win. 209														
			Rem. RP12														
			Rem. RP12														

# 12-Gauge, 2 3/4 inch Rem. Premier, STS Plastic Target Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot		American Select		Green Dot		Unique		Hercu		Blue Dot		2400	
				Grains	Approx. x100	Grains	Approx. x100	Grains	Approx. x100	Grains	Approx. x100	Grains	Approx. x100	Grains	Approx. x100	Grains	Approx. x100
7/8	1,200	Rem. 209P	Claybuster 4100-12 B	17.5	7.1	18.9	5.2										
			Fed. 12SO	17.0	7.2												
			Purple PC	17.5	6.8												
			Rem. TGT 12	17.0	6.8												
			Win. WAA12L (Gray)	16.5	8.0	18.0	5.8										
7/8	1,250	Rem. 209P	Win. WAA12SL	17.0	7.0												
			Claybuster 4100-12 B	18.0	7.4	19.6	5.9										
			Fed. 12SO	18.0	7.8												
			Purple PC	18.5	6.9												
			Rem. TGT 12	18.5	7.1												
7/8	1,300	Rem. 209P	Win. WAA12L (Gray)	17.5	8.7	19.0	6.8										
			Win. WAA12SL	18.5	7.8												
			Claybuster 1100-12			20.5	6.9										
			Claybuster 4100-12 B	19.0	8.1	20.5	6.7										
			Fed. 12SO	20.0	8.1	20.5	7.7	22.0	8.0								
7/8	1,400	Rem. 209P	Purple PC	20.0	7.5												
			Rem. TGT 12	20.5	8.2	20.5	7.0	22.0	7.1								
			Win. WAA12L (Gray)	18.5	9.1	20.0	7.2										
			Win. WAA12SL	20.5	8.0	20.5	7.9	21.5	7.9								
			Win. WAA12L (Gray)			22.0	10.3										
1	1,150	Rem. 209P	Claybuster 1100-12	16.5	7.4			18.5	7.0								
			Rem. TGT 12	17.0	8.3	17.0	6.9	18.0	6.6								
			Win. WAA12L (Gray)	16.5	8.1	17.0	7.5	18.0	6.3								
			Claybuster 1100-12	17.8	8.0	19.5	7.5	19.2	7.5								
			Duster - Green	17.5	10.0	19.0	7.7	19.5	7.5								
1	1,200	Rem. 209P	Fed. 12SO	18.0	9.0	19.5	7.9	19.5	8.6								
			Purple PC	18.5	8.3			20.5	7.0								
			Rem. TGT 12	18.0	8.7	19.0	7.0	20.0	8.2								
			Win. WAA12SL	18.0	9.6	19.0	7.6	19.5	8.6								
			Claybuster 1100-12	18.7	8.8	20.5	8.0	21.0	8.3								
1	1,255	Rem. 209P	Duster - Green	18.5	10.9	20.0	8.4	22.0	8.8								
			Duster - Green					21.0	8.3								
			Fed. 12SO	19.5	10.6	20.5	8.6	21.5	9.3								
			Purple PC	19.5	8.9			21.5	8.5								
			Rem. TGT 12	19.0	9.5	20.5	8.0	21.0	8.5								
1	1,290	CCI 209M	Win. WAA12SL	19.5	10.1	20.5	8.7	21.5	8.9								
			Rem. R12L	20.0	10.3			22.0	9.1								
			Claybuster 1100-12	19.7	9.4	22.5	8.5	22.0	8.5								
			Fed. 12SO	20.0	10.5	21.5	9.9	22.0	8.7								
			Purple PC	20.5	9.1			22.5	8.2								
1 1/8	1,000	Rem. 209P	Rem. Fig. 8	21.5	9.1			22.0	8.1								
			Rem. R12L	20.5	9.9												
			Rem. TGT 12	21.0	10.7	22.5	8.7	22.5	8.4								
			Win. WAA12F1	20.5	9.1			23.0	7.2								
			Win. WAA12SL	20.5	10.4	21.5	9.2	22.5	9.0								
1 1/8	1,090	CCI 209M	Rem. R12L	20.0	10.1			22.0	8.7								
			Rem. Fig. 8	14.5	7.2	15.0	6.5										
			Fed. 12S3	16.0	10.1			17.5	8.5								
			Fiocchi FTW1	16.5	9.7			17.5	8.5								
			Red PC	16.5	9.2			18.0	7.4								
1 1/8	1,090	CCI 209M	Rem. Fig. 8	16.5	9.1			18.0	8.4								
			Rem. RXP12	16.0	9.3			17.5	8.6								
			Win. WAA12 (White)	16.0	9.8			17.0	8.7								
			Windjammer	16.5	8.3			18.0	7.6								
			Pro. 616	16.5	9.0												
1 1/8	1,090	CCI 209M	Rem. Fig. 8	16.5	9.0												
			Claybuster 3118-12	16.2	8.6	17.5	6.9	17.5	7.8								
			Duster-Blue	16.0	9.7	17.0	8.0	17.5	8.2								
			Fed. 12S3	16.0	10.3	17.5	8.2										
			Fiocchi FTW1	16.5	8.5												
1 1/8	1,090	CCI 209M	Red PC	16.5	8.7	17.5	7.0										
			Rem. Fig. 8	16.5	8.3	17.5	7.1	18.5	8.5								
			Rem. RXP12	16.0	8.7	17.0	7.5	18.0	8.7								
			Win. WAA12 (White)	16.0	9.4	17.0	8.1	18.0	8.5								
			Win. WT12 (Orange)	15.5	9.0	17.0	7.3	18.0	8.1								
1 1/8	1,090	CCI 209M	Windjammer	16.5	7.9	18.0	6.9	18.0	7.3								
			Win. 209	Rem. Fig. 8	16.5	8.9											

-Gauge, 2 3/4 inch Rem. Premier, STS Plastic Target Shells

Shot Wt. ounces	Velocity	Primer	Wad	Red Dot		American Select		Green Dot		Unique		Hercu		Blue Dot		2400	
				Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.
				x.00		x100		x100		x.00		x100		x100		x.00	
from Prev. Page: Velocity - 1,145 • Shot Wt. - 1 1/8																	
1 1/8	1,145	CCI 209	Rem. Fig. 8	17.5	8.6			19.5	7.1								
			Fed. 1253	17.5	10.6			19.0	8.9								
			CCI 209M														
			Fiocchi FTW1	17.0	9.9			19.5	9.3								
			Hornady Versalite	17.0	9.1			19.0	8.0								
			Red PC	17.0	9.4			19.0	7								
			Rem. Fig. 8	17.5	9.3			19.0	8.8								
			Rem. RXP12	17.0	9.6			19.0	9.1								
			Win. WAA12 (White)	16.5	10.2			19.0	9.4								
			Windjammer	17.0	9.0			19.5	7.9								
		CCI 209SC	Fed. 1253	18.5	10.4			19.5	9.5								
			Rem. Fig. 8	18.0	10.4	18.5	8.9	20.5	9.9								
			Win. WAA12 (White)					20.0	10.6								
			Windjammer	18.5	9.8												
		Fed. 209A	Fed. 53	16.5	10.1			19.0	9.9								
			Red PC	17.0	10.7			19.5	10.0								
			Rem. Fig. 8	16.5	10.3	18.5	9.2	19.5	10.1								
			Rem. RXP12	16.0	10.6			19.5	10.5								
			Windjammer	17.5	10.5			20.0	9.6								
		Fin. 616	Rem. Fig. 8	17.5	8.9			19.0	7.8								
		Rem. 209P	Claybuster 3118-12	17.0	8.8			19.0	8.7								
			Claybuster 3118-45			19.0	8.4										
			Duster-Blue	17.0	9.8	18.0	8.9	18.5	9.0								
			Fed. 1253	18.0	10.1	18.5	9.1	19.0	8.8								
			Fiocchi FTW1	17.5	9.7			19.5	8.8								
			Hornady Versalite	17.5	9.0			19.0	8.0								
			Lage Uniwad	17.5	9.9			19.0	8.0								
			Red PC	17.5	9.0	19.0	8.2	19.0	7.6								
			Rem. Fig. 8	18.0	9.2	19.0	7.6	19.0	7.3								
			Rem. RXP12	17.5	8.9	18.5	8.3	19.0	7.7								
			Win. WAA12 (White)	17.0	10.1	18.0	9.0	19.0	6.7								
			Win. WT12 (Orange)	18.5	8.8	18.5	8.9	19.5	8.3								
			Windjammer	17.5	8.9	19.0	7.9	19.5	7.8								
			Win. 209	18.0	9.5	18.5	9.0	19.0	8.1								
		CCI 209M	Rem. Fig. 8	19.5	9.9			21.0	8.7	22.5	8.5						
			Fed. 1253					20.5	10.2	22.0	9.7						
			Fiocchi FTW1	18.5	10.6			20.5	9.7								
			Hornady Versalite	19.0	10.4			20.0	9.2	22.0	8.8						
			Red PC	19.0	10.4			20.5	9.0	22.5	8.7						
			Rem. Fig. 8	18.5	10.4			20.0	9.3	22.5	9.5						
			Rem. RXP12	18.5	10.5			20.5	9.2	22.5	9.5						
			Win. WAA12 (White)					21.0	9.6	22.0	9.3						
			Windjammer	18.5	9.7			20.5	8.7	23.5	8.2						
		CCI 209SC	Fed. 1253					20.0	10.6								
			Rem. Fig. 8			20.0	10.3	21.0	10.6								
			Windjammer					22.0	10.4								
			Fed. 209A	17.0	10.4	20.0	10.7	20.5	10.5	23.0	9.2						
			Rem. RXP12	17.0	10.1			21.0	10.4	22.0	9.1						
		Fin. 616	Rem. Fig. 8	19.5	10.6			20.0	8.7	23.0	8.5						
			Claybuster 3118-12	18.5	9.8	20.0	9.5	20.3	9.7	22.2	7.3						
		Rem. 209P	Duster-Blue	18.5	10.3	20.0	10.2	20.0	9.8	22.7	7.8						
			Fed. 1253			20.0	10.6	20.5	9.7	22.0	9.1						
			Fiocchi FTW1	18.5	10.7			20.5	9.9								
			Hornady Versalite					20.0	8.7	22.0	7.9						
			Red PC	19.5	10.1	20.5	9.7	21.0	8.5	22.5	7.8						
			Rem. Fig. 8	19.0	10.1	20.5	9.1	21.0	8.8	22.5	8.2						
			Rem. RXP12	19.0	10.0	20.5	10.2	20.5	8.7	22.5	8.3						
			Win. WAA12 (White)	18.3	10.3	19.2	11.0	21.0	8.9	22.0	8.9						
			Win. WT12 (Orange)	19.5	10.7	20.0	10.6	21.5	8.7	23.5	8.3						
			Windjammer	18.5	9.4	20.5	9.1	20.5	8.2	23.5	7.0						
		Win. 209	Rem. Fig. 8	19.0	10.4	20.0	10.7	20.0	8.6	22.5	8.4						
			Fed. 1253					21.5	10.6	23.5	10.2	24.5	9.9				
1 1/8	1,250	CCI 209M	Hornady Versalite					21.5	10.2	23.5	9.9	24.5	9.9				
			Red PC					22.0	9.6	24.0	9.4	25.0	9.5				
			Rem. RXP12					22.0	9.6	24.0	10.4	24.5	9.8				
			Win. WAA12 (White)					22.5	10.7	24.0	10.3	24.5	10.4				
			Windjammer					22.0	9.4	25.0	9.3	25.0	9.4				
		Fin. 616	Rem. RXP12					22.0	9.1	23.5	9.1						
			Claybuster 3118-12			21.5	10.6	21.0	9.8								
		Rem. 209P	Duster-Blue					21.5	10.3								
			Rem. Fig. 8			21.5	9.9	21.5	10.7								
			Rem. RXP12			21.0	10.5	21.1	10.0								
			Win. WT12 (Orange)					22.0	10.6								
		Win. 209	Rem. RXP12					22.0	9.4	24.5	8.8						

## 12-Gauge, 2 3/4 inch Rem. Premier, STS Plastic Target Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot		American Select		Green Dot		Unique		Hercu		Blue Dot		2400	
				Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.
				x100		x100		x100		x100		x100		x100		x100	
Cont. from Prev. Page: Velocity - 1,310 - Shot Wt. - 1 1/8																	
1 1/8	1,310	CCI 209M	Rem. RXP12							25.0	10.0	26.5	9.7				
			Fio. 616							26.0	9.9	27.5	9.3				
			Rem. 209P							25.5	9.9	27.0	8.8				
			Rem. RXP12							24.5	9.7	27.5	8.4				
			Win. WAA12 (White)							25.0	10.5	27.0	8.8				
1 1/4	1,220	CCI 209M	Windjammer							26.5	8.6	28.5	8.6				
			Rem. RXP12							26.0	9.8	27.0	9.5				
			Fio. 616							23.5	10.3	24.5	10.0				
			Rem. 209P							23.0	9.6	24.5	9.3				
			Fed. 12S4							23.0	10.7	25.0	10.4				
1 1/4	1,275	CCI 209M	Hornady Versalite							23.5	9.4	25.0	8.4				
			Rem. SP12							23.5	9.3	25.0	9.6				
			Fio. 616							24.0	10.1	24.5	9.3				
			Rem. 209P							23.5	10.0	24.5	9.6				
			Fed. 12S4														
1 1/4	1,330	CCI 209M	Rem. SP12									27.0	10.7	34.5	9.8		
			Fio. 616									26.5	10.5	35.5	9.3		
			Rem. 209P									26.0	10.6	34.0	10.1		
			Fed. 12S4											34.5	8.6		
			Win. WAA12F114														
1 1/4	1,330	CCI 209M	Rem. SP12											35.5	9.1		
			Fio. 616											35.5	10.3		
			Rem. 209P											35.5	9.9		
			Claybuster 3118-12											37.5	10.2		
			Rem. SP12											37.5	9.7		
1 3/8	1,240	CCI 209M	Rem. SP12											36.5	9.9		
			Fio. 616											34.0	9.4		
			Rem. 209P											34.0	9.1		
			Claybuster 1138-12											34.0	9.9		
			Rem. SP12											35.0	9.3		
1 3/8	1,295	CCI 209M	Rem. SP12											35.0	9.1		
			Fio. 616											35.5	10.4		
			Rem. 209P											35.5	10.0		
			Rem. RP12											36.5	9.9		
			Rem. SP12											37.5	10.3		
1 1/2	1,150	CCI 209M	Rem. RP12											35.5	10.5		
			Fio. 616											31.0	9.9		
			Rem. 209P											31.0	9.8		
			Claybuster 1138-12											32.0	10.6		
			Rem. RP12											31.0	9.9		
1 1/2	1,205	CCI 209M	Rem. RP12											31.5	10.1		
			Fio. 616											33.0	10.1		
			Rem. 209P											33.0	10.1		
			Rem. RP12											33.0	10.2		
			Win. 209											33.0	10.2		

## 12-Gauge, 2 3/4 inch Rem.-Peters Unibody SP Plastic Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot		American Select		Green Dot		Unique		Hercu		Blue Dot		2400	
				Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.
				x100		x100		x100		x100		x100		x100		x100	
1	1,290	CCI 209	Rem. R12L	21.0	9.7			23.5	8.1								
			CCI 209M	20.0	10.6			22.5	8.1								
			Rem. 209					22.0	9.2								
			Rem. RXP12					21.5	9.9								
			Win. WAA12F1					21.0	9.9								
1 1/8	1,145	CCI 209	Rem. R12L	20.0	10.7			21.5	8.8								
			Rem. RXP12	18.0	10.1			18.5	9.2								
			CCI 209M	17.0	10.2			18.5	9.1								
			Rem. 209	17.0	10.1			19.0	9.2								
			Fed. 12S3	17.0	8.8			18.0	8.5								
1 1/8	1,200	CCI 209	Hornady Versalite	17.5	9.3			19.0	8.5								
			Rem. R12H					19.0	8.8								
			Rem. RXP12	17.0	10.2			17.5	10.0								
			Win. WAA12 (White)	17.0	10.5			18.5	8.8								
			Rem. RXP12					21.0	8.8	23.0	8.3						
1 1/8	1,200	CCI 209M	Rem. RXP12					20.0	10.0	22.0	8.8						
			Rem. 209							21.5	8.8						
			Fed. 12S3							21.0	8.2						
			Hornady Versalite	18.0	10.0			19.0	9.9	21.0	8.3						
			Rem. R12H	18.0	10.0			19.5	9.4	21.5	8.3						
1 1/8	1,200	CCI 209M	Rem. RXP12	18.0	10.5			20.0	9.8	22.0	9.1						
			Win. WAA12 (White)					19.5	10.0	21.5	8.4						

2-Gauge, 2 3/4 inch Rem.-Peters Unibody SP Plastic Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Herco Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
Continued from Prev Page: Velocity - 1,200 • Shot Wt. - 1 1/8										
1 1/8	1,255	CCI 209M	Windjammer	18.5	9.6	20.5	8.3	22.0	7.7	
			Rem. RXP12			20.5	9.8	22.0	8.9	
			Rem. RXP12			22.5	10.5	23.0	8.8	
			Rem. RXP12			23.0	10.1	23.0	9.7	
			Fed. 1253			22.5		22.5	9.8	
1 1/8	1,310	CCI 209M	Rem. R12H			20.5	10.4	22.5	8.3	
			Rem. RXP12			20.5	10.5	22.5	9.2	
			Win. WAA12 (White)			22.5		22.5	9.2	
			Rem. RXP12			20.5		20.5	9.8	
			Rem. R12H			20.5		20.5	9.6	27.0 9.3
1 1/8	1,310	CCI 209M	Rem. R12H			20.5	10.7	20.5	10.3	
			Rem. R12H			24.5	10.1	20.5	10.1	
			Rem. RXP12			24.0	10.0	25.5	10.2	
			Win. WAA12 (White)			24.0	10.3	24.5	10.2	
			Rem. R12H			20.5	10.7	26.5	10.7	
1 1/8	1,220	CCI 209M	Rem. SP12			24.5	9.6	25.5	9.1	
			Rem. SP12			20.5	10.1			32.0 8.5
			Rem. SP12			22.5	9.7	23.5	9.4	
			Win. WAA12F114			23.0	10.1	23.0	10.1	30.0 10.3
			Rem. SP12			23.0	10.6	24.5	10.5	33.0 9.0
1 1/8	1,275	CCI 209M	Rem. SP12							35.5 8.9
			Rem. SP12							33.5 9.8
			Rem. SP12							32.0 10.2
			Win. WAA12F114							32.0 10.0
			Rem. SP12							35.0 10.3
1 1/8	1,330	CCI 209M	Rem. RP12							37.5 9.7
			Rem. RP12							35.5 10.4
			Rem. RP12							36.0 10.1
			Rem. RP12							32.5 10.5
			Rem. RP12							32.0 8.4
1 1/8	1,350	CCI 209M	Rem. RP12							31.5 9.2
			Rem. RP12							31.5 9.6
			Activ T42							32.5 8.0
			Rem. RP12							32.0 8.3
			Win. WAA12							29.5 10.3
1 1/8	1,115	CCI 209M	Activ T42							29.5 10.4
			Activ T42							29.5 10.4
			Activ T42							29.5 10.5
			Activ T42							29.5 10.5
			Activ T42							29.5 10.4

2-Gauge, 2 3/4 inch Win. Plastic AA Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Herco Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
1 1/8	1,200	Win 209	Claybuster 4100-12 B	18.5	6.9	18.5	5.6			
			Fed. 1250	16.0	8.0					
			Purple PC	16.5	7.5					
			Rem. TGT 12	16.5	7.3					
			Win. WAA12L (Gray)		6.0	6.2				
1 1/8	1,250	Win 209	Win. WAA12SL	16.5	7.3					
			Win. WAA1 (Gray)	16.5	7.9					
			Claybuster 4100-12 B	18.0	6.0	19.5	6.1			
			Fed. 1250	16.5	8.0					
			Purple PC	18.5	8.1					
1 1/8	1,300	Win 209	Rem. TGT 12	18.5	8.1					
			Win. WAA12SL	18.5	9.5					
			Win. WAA1 (Gray)	18.5	8.6	18.5	2.0			
			Claybuster 1100-12		2.0	2.0				
			Claybuster 4100-12 B	18.5	7.9	20.5	6.9			
1 1/8	1,400	Win 209	Fed. 1250	17.0	9.1	21.0	8.3	20.0	8.9	
			Purple PC	19.5	9.1	20.5	2.0	20.5	7.9	
			Rem. TGT 12	19.5	9.3	20.5	7.6	20.5	8.4	
			Win. WAA12SL	19.0	10.3	20.5	8.4	20.5	8.8	
			Win. WAA1 (Gray)	18.5	10.5	19.5	8.0	20.0	8.3	
1 1/8	1,550	Win 209	Win. WAA1 (Gray)		10.2					
			Claybuster 1100-12	16.5	7.9	18.5	6.7	18.5	7.6	
			Win. WAA12L (Gray)	16.5	8.1	18.5	6.7	18.5	7.6	
			Win. WAA12SL	16.5	9.0	18.5	6.7	18.5	8.1	
			Claybuster 1100-12	18.0	8.6	18.5	6.9	19.8	8.3	
1 1/8	1,200	Win 209	Duster - Green			19.0	8.1	19.5	8.3	

# 12-Gauge, 2 3/4 inch Win. Plastic AA Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot		American Select		Green Dot		Unique		Hercu		Blue Dot		2400	
				Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.	Grains	Approx.
				x100		x100		x100		x100		x100		x100		x100	
Cont. from Prev. Page: Velocity - 1,200 • Shot Wt. - 1																	
1	1,255	Win. 209	Fed. 1250	18.0	9.6	19.0	8.7	19.5	8.4								
			Purple PC	18.0	8.9			19.5	7.8								
			Rem. TGT 12	18.0	9.2	19.0	8.0	19.5	7.9								
			Win. WAA12SL	18.0	10.2	19.0	8.2	19.5	8.5								
			Win. WT12 (Orange)	17.5	10.6	19.0	8.4										
			Win. WT12 (Orange)			19.0	8.4	19.5	8.1								
			Claybuster 1100-12	19.0	9.3	20.5	8.8	21.0	8.2								
			Claybuster 1100-12					21.0	8.2								
			Duster - Green			20.0	8.9	20.5	9.2								
			Fed. 1250			20.0	10.0										
			Purple PC	19.0	9.7			21.5	8.7								
			Rem. TGT 12	19.5	9.8	20.0	9.1	21.0	8.8								
			Win. WAA12SL	19.0	10.5	20.0	9.5	21.0	9.2								
1	1,290	CCI 209M Win. 209	Win. WAA12 (White)	18.5	10.4			21.5	9.9								
			Claybuster 1100-12	19.5	8.9	21.5	9.2	22.0	9.1								
			Duster - Green			21.5	9.7	22.0	9.5								
			Fed. 12C1	20.0	10.2			21.0	8.8								
			Fed. 1253	20.0	9.9			22.5	9.7								
			Fed. 1250			20.5	10.2										
			Purple PC	20.0	10.4			22.0	9.0								
			Rem. RXP12	20.0	10.1			21.0	8.8								
			Rem. TGT 12			21.0	9.5	22.0	9.7								
			Win. WAA12 (White)	19.0	10.5			20.0	8.7								
			Win. WAA12SL	19.5	11.2	21.5	10.3	21.5	9.5								
1 1/8	1,090	CCI 209M CCI 209SC Fed. 209A Fio. 616 Rem. 209P Win. 209	Win. WAA12 (White)	17.0	9.8												
			Win. WAA12 (White)			17.0	7.9										
			Win. WAA12 (White)			17.0	8.7										
			Win. WAA12 (White)	16.0	8.9												
			Win. WAA12 (White)	17.0	8.1	17.0	8.0										
			Claybuster 1100-12	16.0	8.0	17.0	6	17.5	7.8								
			Duster Blue	15.5	10.3	17.0	8.3	17.5	8.3								
			Fed. 1253	17.0	10.4			18.0	9.7								
			Hornady Versalite	16.5	9.0			17.5	7.8								
			Red PC	16.0	9.1	17.0	7.3	18.0	7.3								
			Rem. Fig. 8	16.0	8.3	17.5	8.1	18.0	7.4								
			Rem. RXP12	16.5	9.0	17.0	9.1	17.5	7.6								
			Win. WAA12 (White)	16.0	9.5	17.0	9.0	17.5	8.1								
			Win. WAA12SL	16.0	9.3	16.8	8.4	18.0	8.0								
1 1/8	1,145	CCI 209M CCI 209SC Fed. 209A Fio. 616 Rem. 209P Win. 209	Win. WT12 (Orange)					16.5	9.0								
			Win. WAA12 (White)	17.5	10.4			18.5	10.1								
			Rem. Fig. 8	18.0	10.5			20.5	9.7								
			Win. WAA12 (White)	17.5	10.6	18.5	9.6	19.5	10.3								
			Windjammer	18.0	9.9			20.5	9.5								
			Claybuster 3118-12	17.0	9.6			18.5	8.4								
			Hornady Versalite	17.0	10.3			18.5	9.3								
			Red PC	17.0	10.1			18.5	8.7								
			Rem. Fig. 8	17.0	9.8			18.5	8.6								
			Win. WAA12 (White)	17.0	10.6	18.5	9.8	18.0	9.3								
			Windjammer	17.0	9.0			18.5	8.2								
			Win. WAA12 (White)	17.0	10.2			18.5	9.4								
			Win. WAA12 (White)	17.5	8.7	19.0	8.7										
			Claybuster 3118-12	16.8	9.1	18.5	9.0	19.1	9.3								
1 1/8	1,200	CCI 209M CCI 209SC Fed. 209A Fio. 616	Duster Blue	16.5	10.6	18.0	9.0	19.0	9.3								
			Fed. 12C1	17.5	9.4			18.5	8.1								
			Hornady Versalite	18.0	9.5			19.5	8.0								
			Red PC	17.5	9.5	18.5	8.6	19.0	8.3								
			Rem. Fig. 8	17.5	9.9	19.0	9.4	19.0	8.6								
			Rem. RXP12	17.0	8.4	19.0	9.4	18.0	8.1								
			Win. WAA12 (White)	17.0	10.0	18.0	9.4	18.0	8.5								
			Win. WAA12SL			18.5	9.7	19.0	9.4								
			Win. WT12 (Orange)	16.5	10.7	18.5	9.6	18.0	9.4								
			Windjammer	17.5	9.3	18.5	8.1	18.0	8.4								
			Win. WAA12 (White)	18.5	10.5			20.0	10.4	21.5	10.3						
			Rem. Fig. 8	18.5	10.4			21.0	10.4								
			Win. WAA12 (White)			19.5	10.1	20.5	10.7								
			Windjammer					21.0	10.2								
			Claybuster 3118-12	18.5	10.5			19.5	9.3								
1 1/8	1,200	CCI 209M CCI 209SC Fed. 209A Fio. 616	Hornady Versalite	18.0	10.7			19.5	10.4								
			Red PC	18.0	10.0			19.5	10.5								
			Rem. Fig. 8	18.5	10.2			19.5	9.4								
			Win. WAA12 (White)			19.5	10.8	19.0	10.2								
			Windjammer	18.0	10.0			20.0	9.2								
			Win. WAA12 (White)	18.0	10.5			20.0	9.5	21.5	9.1						

2-Gauge, 2 3/4 inch Win. Plastic AA Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercos Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100		
Continued from Prev. Page: Velocity - 1,200 • Shot Wt. 1 1/8												
1 1/8	1,250	Rem. 209P	Win. WAA12 (White)	19.0	9.5	21.0	9.6	20.0	9.8	23.0	7.5	
		Win. 209	Claybuster 3118-12	19.5	10.5	19.5	10.2	20.0	9.8	22.5	8.8	
			Duster-Blue	19.5	10.8	19.5	10.0	20.0	9.4	22.0	8.3	
			Fed. 12CI	18.5	9.7			19.5	9.0	22.0	8.9	
			Hornady Versalite	19.0	9.7			21.0	10.0	21.0	8.2	
			Red PC	18.5	10.5	20.0	10.1	20.5	9.8	23.5	9.5	
			Rem. Fig. 8	18.5	10.5	20.0	9.8	20.5	9.5	22.5	8.3	
			Rem. RXP12	18.5	9.8	20.5	10.7	19.5	8.9	22.0	8.7	
			Win. WAA12 (White)	18.0	10.4	19.5	10.3	19.5	9.3	21.0	9.1	
			Win. WAA12SL					19.5	10.3	22.5	9.1	
			Win. WT12 (Orange)	17.0	10.7	19.5	10.7	20.0	9.2	21.5	9.6	
			Windjammer	18.5	9.9	20.5	9.2	20.0	9.0	22.5	8.2	
			Win. WAA12 (White)	22.0	10.5			23.5	10.1			
			Rem. 209P	Rem. Fig. 8			22.5	9.4				
			Win. 209	Win. WAA12 (White)			20.5	10.0		24.0	9.3	
1 1/8	1,310	CCI 209M	Claybuster 3118-12			20.5	10.0					
		Win. 209	Fed. 12CI					21.0	10.2	23.0	9.5	
			Hornady Versalite					22.0	10.9	24.0	9.4	
			Red PC			21.5	10.5	22.0	10.3	24.5	10.0	
			Rem. Fig. 8			22.0	10.3	22.0	10.3	24.0	9.0	
			Rem. RXP12			21.5	10.8	21.0	9.5	23.0	9.2	
			Win. WAA12 (White)					21.5	10.5	23.5	9.4	
			Win. WAA12SL						24.0	9.9		
			Win. WT12 (Orange)					21.5	10.8	22.5	9.5	
		CCI 209M	Win. WAA12 (White)						23.5	9.7		
		Rem. 209P	Win. WAA12 (White)						26.0	9.7		
		Win. 209	Hornady Versalite						25.0	10.3		
			Red PC					20.0	10.2	25.0	9.1	
			Rem. RXP12						24.0	9.8		
			Win. WAA12 (White)						23.5	10.0		
1 1/4	1,220	CCI 209M	Win. WAA12F114						23.5	9.9		
		Fio. 616	Win. WAA12F114						23.0	10.3		
		Rem. 209P	Win. WAA12F114						24.0	10.0		
		Win. 209	Claybuster 1138-12						25.0	10.3		
			Hornady Versalite						24.0	9.8		
			Rem. RP12						22.5	9.5		
			Win. WAA12F114						23.5	9.9		
		Rem. 209P	Win. WAA12F114						27.0	9.4		
		Win. 209	Rem. SP12								33.0	8.3
			Win. WAA12F114								35.0	8.2
		Win. 209	Rem. RP12								35.0	10.3
			Rem. SP12								35.0	10.3
			Win. WAA12R								35.0	10.2
		Win. 209	Claybuster 1138-12								35.0	10.6
1 1/4	1,375	Win. 209	Rem. RP12								33.0	10.4
		Win. 209	Rem. SP12								31.0	9.5
		Win. 209	Rem. RP12								30.0	9.8
		Win. 209	Win. WAA12R								31.0	10.4
		Win. 209	Claybuster 1138-12								35.0	10.2
		Win. 209	Rem. RP12								31.0	9.5
		Win. 209	Rem. SP12								30.0	9.8
		Win. 209	Rem. RP12								31.0	10.4
		Win. 209	Win. WAA12R								35.0	10.2
		Win. 209	Claybuster 1138-12								35.0	10.2
		Win. 209	Rem. RP12								31.0	9.5
		Win. 209	Rem. SP12								30.0	9.8
		Win. 209	Rem. RP12								31.0	10.4
		Win. 209	Win. WAA12R								35.0	10.2
		Win. 209	Claybuster 1138-12								35.0	10.2

2-Gauge, 2 3/4 inch Win. Polyformed with Plastic Wad

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercos Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
1	1,290	CCI 209M	Win. WAA12F1	21.0	8.4		23.0	7.5		
		Fed. 209	Win. WAA12F1	21.0	8.2					
		Fio. 616	Win. WAA12F1	21.5	7.9		23.0	7.4		
		Rem. 209P	Win. WAA12F1	21.5	7.8					
		Win. 209	Fed. 12SO	21.0	9.6					
			Purple PC	21.5	7.9		24.0	6.8		
			Rem. Fig. 8	21.5	8.5		23.0	7.8		
			Win. WAA12F1	22.0	7.6		23.5	7.0		
		CCI 209M	Win. WAA12 (White)	17.0	8.0		18.5	7.0		
		Fio. 616	Win. WAA12 (White)	17.0	7.6					
		Rem. 209P	Win. WAA12 (White)	16.5	6.0					
		Win. 209	Fed. 1255	17.5	7.8					
			Hornady Versalite	16.5	7.9		18.5	6.7		
			Red PC	17.0	7.5					
			Rem. Fig. 8	17.0	6.9		18.5	6.7		
			Win. WAA12 (White)	16.5	7.8					

## 12-Gauge, 2 3/4 inch Win. Polyformed with Plastic Wad

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercos Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
Cont. from Prev. Page: Velocity - 1,145 • Shot Wt. - 1 1/8										
1 1/8	1,145	CCI 209M	Win. WAA12 (White)	18.0	9.0	20.0	7.4			
			Fio. 616	18.5	8.3	20.0	6.8			
			Rem. 209P	18.5	8.1					
			Win. 209	18.0	8.9					
			Hornady Versalite	18.0	8.6	20.0	7.2			
			Red PC	18.5	7.8	20.5	6.8			
			Rem. Fig. 8	18.0	8.0	19.5	7.0			
			Win. WAA12 (White)	18.0	8.5	20.5	7.3			
			Fio. 616	19.5	9.3	21.5	7.6	23.5	7.2	
			Rem. 209P	19.5	9.0			23.5	7.9	
1 1/8	1,200	Win. 209	Fed. 12S3	19.0	9.6	21.5	8.3	23.5	8.3	
			Hornady Versalite	19.0	9.4	21.5	7.7	23.0	7.7	
			Red PC	19.5	8.4	22.0	7.6	23.5	7.6	
			Rem. Fig. 8	19.0	8.7	21.5	8.2	23.0	7.4	
			Win. WAA12 (White)	19.5	8.9	22.0	8.7	23.0	7.6	
	1,255	CCI 209M	Win. WAA12 (White)	21.5	10.0	23.0	8.8	25.0	8.5	
			Fio. 616	21.5	10.1	23.0	8.6	25.0	8.0	
			Rem. 209P	21.5	9.5			25.5	7.7	
			Win. 209			23.5	8.6	25.0	8.4	
			Fed. 12S3			24.0	8.3	25.0	8.0	
			Hornady Versalite	21.5	9.7	23.5	8.0	25.0	7.9	
			Red PC	21.0	9.9	23.5	8.8	25.0	8.5	
			Win. WAA12 (White)	21.0	9.4	23.5	8.8	25.0	8.5	
	1,310	CCI 209M	Win. WAA12 (White)	22.0	9.4	25.0	9.0	26.0	8.5	
			Fio. 616	22.5	10.6	24.5	8.9	27.5	9.2	
			Rem. 209P	22.5	10.2	25.0	8.8	27.0	9.0	
			Win. 209			24.5	9.9	26.0	9.4	
			Fed. 12S3			25.0	8.9	26.5	9.0	
			Hornady Versalite	22.5	10.3	25.5	8.7	26.5	8.6	
			Red PC	22.5	10.2	25.5	8.9	26.5	8.6	
			Win. WAA12 (White)							

## 12-Gauge, 3 inch Fed. Hi Power Plastic Shells with Rolled Paper Base Wad

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercos Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
1 3/8	1,295	Fed. 209A	Fed. 12S3 Rem. RXP12 Win. WAA12 (White)					30.5 10.0 30.5 9.3 30.5 9.7	38.0 9.0 38.0 8.8 40.0 9.4	
1 3/8	1,350	Fed. 209A	Fed. 12S4 Rem. SP12						40.0 9.4 40.0 8.9	
1 1/2	1,315	Fed. 209A	Fed. 12S3 Rem. RXP12 Win. WAA12 (White)						38.0 9.7 38.5 9.6 37.5 9.8	
1 5/8	1,280	Fed. 209A	Rem. SP12						39.0 10.4	
1 3/4	1,245	Fed. 209A	Rem. RP12						39.0 10.5	
1 7/8	1,155	Fed. 209A	Rem. RP12 Rem. SP12						34.0 10.5 36.0 10.3	

## 12-Gauge, 3 inch Fed. One-Piece Plastic Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot		American Select		Green Dot		Unique		Hercos		Blue Dot		2400	
				Grains	Approx. x100	Grains	Approx. x100	Grains	Approx. x100	Grains	Approx. x100	Grains	Approx. x100	Grains	Approx. x100	Grains	Approx. x100
1 3/8	1,295	Fed. 209A	Fed. 12S3 Rem. RXP12 Win. WAA12 (White)							31.0	10.5	40.5	7.9				
1 3/8	1,350	Fed. 209A	Rem. RXP12 Win. WAA12 (White)							32.0	10.1			38.0	9.8		
1 1/2	1,315	Fed. 209A	Fed. 12S4 Rem. SP12											42.0	8.0		
1 5/8	1,280	Fed. 209A	Fed. 12S4 Rem. SP12											44.0	9.9		
1 3/4	1,245	Fed. 209A	Rem. RP12											40.0	9.7		
1 7/8	1,155	Fed. 209A	Rem. SP12											40.0	9.0		
														40.0	10.1		
														40.0	9.4		
														39.0	10.5		
														36.5	9.9		

## 2-Gauge, 3 inch Federal High Power Plastic with 7/16 Fiber Base Wad

Shot Wt. ounces	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Herco Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
1 7/8	1,175	Fed. 209A	Win WAA12R						32.5 11.2	
2	1,150	Win. 209	Rem. SP12						33.0 11.4	

## 2-Gauge, 3 inch Fiocchi Plastic Shells

Shot Wt. ounces	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Herco Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
1 3/8	1,295	CCI 209M Fio. 616	Fed. 12S3 Fed. 12S3 Fiocchi FTW1 Rem. RXP12 Win. WAA12 (White)					30.0 10.0 31.5 9.1 31.0 9.2 32.5 8.6 31.5 8.9	37.0 9.0	
1 3/8	1,350	Win. 209 CCI 209M Fio. 616	Fed. 12S3 Fed. 12S4 Fed. 12S4 Rem. SP12					29.5 10.6 32.0 10.7 32.5 10.1	37.5 8.8 38.0 10.4	
1 1/2	1,315	Win. 209 CCI 209M Fio. 616	Fed. 12S4 Fed. 12S4 Fed. 12S4 Rem. SP12						38.5 10.1 38.0 10.4 39.0 10.3 39.0 9.7	
1 5/8	1,280	Win. 209 Fio. 616	Fed. 12S4 Fed. 12S4 Rem. SP12						39.0 10.6 39.0 10.7 39.5 9.7	
1 7/8	1,155	Fio. 616	Rem. RP12						34.5 10.7	

## 2-Gauge, 3 inch Rem.-Peters SP Plastic Shells with Separate Plastic Base Wad

Shot Wt. ounces	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Herco Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
1 3/8	1,295	CCI 209M	Fed. 12S3 Rem. RXP12 Win. WAA12 (White)					29.5 10.0 30.0 9.2 30.0 10.0		
1 3/8	1,350	CCI 209M	Fed. 12S3 Rem. RXP12 Win. WAA12 (White)						42.0 8.4 42.5 8.0 42.0 8.5	
1 1/2	1,315	CCI 209M	Fed. 12S4 Rem. SP12						39.5 9.8 40.0 9.4	
1 5/8	1,280	CCI 209M	Fed. 12S4 Rem. SP12 Win. WAA12F114						38.5 10.2 39.0 9.8 38.5 10.5	
1 3/4	1,245	CCI 209M	Rem. RP12						38.5 10.7	
1 7/8	1,155	CCI 209M	Rem. RP12						34.0 10.3	

## 2-Gauge, 3 1/2 inch Fed. Plastic Shells

Shot Wt. ounces	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Herco Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
1 7/8	1,200	CCI 209M	Fed. 12SO Rem. R12L Win. WAA12SL						41.0 9.1 40.5 9.6 41.0 8.9	
1 7/8	1,255	Win. 209 CCI 209M	Fed. 12SO Fed. 12SO Rem. R12L Win. WAA12SL						40.0 9.0 43.0 9.8 42.5 10.1 43.0 9.5	
2	1,220	Win. 209 CCI 209M	Fed. 12SO Fed. 12SO Rem. R12L Win. WAA12SL						42.5 10.1 42.5 10.0 42.0 10.0 42.5 9.8	
2 1/4	1,150	Win. 209 CCI 209M	Fed. 12SO Fed. 12S4 Rem. SP12 Win. WAA12F114						41.0 9.9 38.5 11.1 39.5 11.2 38.5 11.1	
		Win. 209	Fed. 12S4						38.0 10.9	

## 12-Gauge, 3 1/2 inch Rem. Plastic SP

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercos Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
1 7/8	1,200	CCI 209M	Fed. 12SO Rem. R12L Win. WAA12SL						38.0 10.1 38.0 10.3 38.0 10.0	
		Win. 209	Rem. R12L						37.5 10.5	
1 7/8	1,255	CCI 209M	Fed. 12SO Rem. R12L Win. WAA12SL						39.0 10.6 39.0 10.9 39.0 10.4	
		Win. 209	Rem. R12L						38.5 11.0	
2	1,220	CCI 209M	Fed. 12SO Rem. R12L Win. WAA12SL						39.5 10.8 39.5 11.1 39.0 10.7	
		Win. 209	Rem. R12L						39.0 11.2	
2 1/4	1,150	CCI 209M	Fed. 12S4 Rem. SP12						37.0 11.1 38.0 11.1	
		Win. 209	Rem. SP12						38.0 11.5	

## 12-Gauge, 3 1/2 inch Win. Plastic Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercos Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
1 7/8	1,200	CCI 209M	Win. WAA12SL						38.0 10.1	
		Win. 209	Fed. 12SO Rem. R12L Win. WAA12SL						38.5 10.6 38.5 10.3 38.5 10.0	
1 7/8	1,255	CCI 209M	Win. WAA12SL						39.5 10.5	
		Win. 209	Fed. 12SO Rem. R12L Win. WAA12SL						40.5 10.7 40.0 10.7 40.0 10.8	
2	1,220	CCI 209M	Win. WAA12SL						39.0 11.2	
		Win. 209	Fed. 12SO Rem. R12L Win. WAA12SL						40.5 11.0 39.0 10.6 40.0 11.2	
2 1/4	1,150	Win. 209	Rem. SP12						37.0 11.2	

## 16-Gauge, 2 3/4 inch Fed. Plastic Hi Power Shells with Paper Base Wad

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercos Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
1	1,220	Fed. 209A	Win. WAA16			19.0 9.8	21.0 8.4	21.5 8.1		
1	1,275	Fed. 209A	Win. WAA16				23.0 8.8	23.5 8.7		
1 1/8	1,185	Fed. 209A	Rem. SP16 Win. WAA16			19.0 10.6 18.5 10.2	21.5 8.9 21.0 8.7	22.0 9.1 22.0 9.1		
1 1/8	1,240	Fed. 209A	Rem. SP16 Win. WAA16				22.5 9.6 22.0 10.2	23.5 10.1 24.0 10.2		
1 1/8	1,295	Fed. 209A	Rem. SP16					24.5 10.3	32.0 8.6	
1 1/4	1,260	Fed. 209A	Rem. SP16						30.5 10.2	

## 16-Gauge, 2 3/4 inch Fiochi Plastic Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercos Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
1	1,165	Fio. 616	Win. WAA16	15.5 10.4		17.5 9.4	19.0 8.1			
1	1,220	Fio. 616	Win. WAA16			18.0 10.5	20.5 8.8	21.0 8.9		
1	1,275	Fio. 616	Win. WAA16				21.0 9.9	22.0 9.6		
1 1/8	1,185	Fio. 616	Rem. SP16 Win. WAA16				20.5 9.9 19.5 10.6	21.0 10.2		
1 1/8	1,240	Fio. 616	Rem. SP16					23.5 10.7	31.0 8.9	
1 1/8	1,295	Fio. 616	Rem. SP16						32.5 9.2	

## 6-Gauge, 2 3/4 inch Rem.-Peters SP Plastic Shells with Plastic BaseWad

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercu Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
1	1,165	Rem. 209P	Win. WAA16			16.5 10.2	19.0 8.6			
1	1,220	Rem. 209P	Win. WAA16				20.0 9.4	21.0 9.7		
1	1,275	Rem. 209P	Win. WAA16				21.0 10.2	22.0 9.6		
1 1/8	1,185	Rem. 209P	Win. WAA16				20.0 10.3	21.0 10.6		
1 1/8	1,240	Rem. 209P	Rem. SP16						27.0 9.9	

## 6-Gauge, 2 3/4 inch Win. AA-Type Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercu Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
1	1,165	Win. 209	Win. WAA16				19.0 9.2			
1	1,220	Win. 209	Win. WAA16				19.5 10.5	20.0 10.2		
1	1,275	Win. 209	Rem. SP16						29.0 9.3	
1 1/8	1,185	Win. 209	Rem. SP16						27.0 10.0	

## 20-Gauge, 2 3/4 inch Fed. Plastic Target Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercu Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
7/8	1,155	CCI 109	Fed. 20S1			14.5 8.4				
			Lage Uniwad			15.5 8.7	17.0 8.3			
			Rem. RXP20				16.0 8.6			
			Win. WAA20			14.5 8.0				
			CCI 209M			14.5 9.1	16.0 8.7			
7/8	1,200	CCI 109	Fed. 20S1			15.5 10.0				
			Hornady Versalite			16.0 10.1				
			Lage Uniwad			14.5 9.7				
			Win. WAA20			15.0 10.0	16.5 8.6			
			Windjammer			15.5 9.4	17.0 8.5	17.0 9.3		
			Fed. 20S1			16.0 10.0	18.0 8.8			
			Lage Uniwad			16.0 9.6	17.0 9.2	18.0 8.8		
			Rem. RXP20			15.5 9.1	17.0 8.5	17.0 9.1		
			Win. WAA20			16.5 9.3	17.0 9.1	17.5 7.6		
			CCI 209M			16.5 10.6				
1	1,165	Fed. 209	Fed. 20S1			16.0 10.5				
			Hornady Versalite			16.5 11.0				
			Lage Uniwad			16.0 10.9	17.0 10.6	18.5 10.2		
			Windjammer			16.0 11.2	18.0 9.8	18.0 9.2		
			Fed. 209A							
			PC 20							
			Rem. RXP20							
			SP20				16.0 10.8	17.0 9.6		
			Win. WAA20F1				15.5 11.3	16.5 11.1		
			CCI 209M					18.5 9.8		
1	1,220	Fed. 209	Fed. 20S1						24.0 10.2	
			Rem. SP20						24.0 10.1	
1 1/8	1,175	Fed. 209	Win. WAA20F1							
			Rem. SP20						23.0 10.9	

## 20-Gauge, 2 3/4 inch Fiocchi Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercu Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
7/8	1,155	CCI 209M	Fed. 20S1			14.5 10.5	16.0 9.2			
			Fed. 209			14.5 11.1	15.5 10.0			
			Fio. 616			15.0 9.1				
			Fed. 20S1			14.5 10.4	17.0 9.1			
			Fed. 20S1			16.0 9.5				
			Hornady Versalite			15.5 9.7	18.0 8.3			

## 20-Gauge, 2 3/4 inch Fiocchi Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercos Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
Cont. from Prev. Page: Velocity - 1,155 • Shot Wt. - 7/8										
7/8	1,200		Lage Uniwad			15.5	9.5	17.5	8.6	
		Rem. 209	Fed. 20S1			14.5	10.0	16.0	9.4	
		Win. 209	Fed. 20S1			14.5	10.6	16.5	9.0	
		CCI 209M	Fed. 20S1			15.5	10.7	17.0	10.0	17.0 9.9
		Fed. 209	Fed. 20S1			15.5	11.1	17.0	10.8	17.5 10.2
		Fio. 615	Fed. 20S1			16.0	10.9	18.0	9.7	18.0 9.2
			Hornady Versalite			16.0	10.0			19.0 8.3
			Lage Uniwad			17.5	8.2	19.0	8.0	
			Rem. RXP20			16.5	10.3			19.0 8.5
			Win. WAA20			16.0	10.8	17.5	9.6	18.5 8.7
1	1,220	Fio. 616	Fed. 20S1			15.5	10.6	17.5	10.0	18.0 9.2
		Rem. 209	Fed. 20S1			15.5	10.8			16.5 9.9
		Win. 209	Fed. 20S1			16.0	10.4	16.0	10.1	18.0 9.9
		CCI 209M	Rem. SP20							24.0 10.7
		Fed. 209	Rem. SP20							23.0 10.3
1	1,275	Fio. 615	Rem. SP20							27.5 9.2
		Fio. 616	Rem. SP20							24.5 10.3
		Rem. 209	Rem. SP20							22.5 10.6
		Fed. 209	Rem. SP20							25.0 10.3
		Fio. 616	Rem. SP20							26.0 10.8
1 1/8	1,175	Win. 209	Rem. SP20							26.0 10.6
		Fed. 209	Rem. SP20							23.5 10.7
		Fio. 616	Rem. SP20							23.5 10.0
		Win. 209	Rem. SP20							23.5 11.4

## 20-Gauge, 2 3/4 inch Rem. Premier Plastic Target Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercos Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
7/8	1,155	CCI 209M	Rem. RXP20				15.5	11.0	16.5	10.5
		Fio. 616	Rem. RXP20				16.0	10.7	16.5	10.1
		Rem. 209P	Claybuster 1078-20				15.5	9.5	16.0	9.8
			Duster - Orange				16.5	7.7		
			Fed. 20S1				15.5	10.0	16.0	10.0
			Win. WAA20F1						16.0	9.5
		Win. 209	Rem. RXP20				15.5	10.3	16.5	10.2
		CCI 209	Rem. RXP20				16.5	9.9	17.5	9.4
		CCI 209M	Rem. RXP20				16.0	11.3	17.0	10.8
		Fio. 616	Rem. RXP20				16.5	11.2	17.0	10.7
7/8	1,200	Rem. 209P	Claybuster 1078-20				16.5	10.6	17.5	9.8
			Duster - Orange				17.5	8.1		
			Fed. 20S1				16.5	10.8	17.0	10.5
			Hornady Versalite				16.5	10.2	17.5	10.4
			Lage Uniwad				16.5	10.4	17.5	10.3
			Rem. RXP20				16.5	10.7	17.0	10.6
			Win. WAA20F1				16.0	11.0	17.5	10.4
			Win. WAA20				16.5	10.9	17.0	10.7
			Windjammer				16.0	10.4	17.0	10.1
		Win. 209	Rem. RXP20				16.5	11.3	17.0	10.6
1	1,075	Rem. 209P	Win. WAA20F1					14.5	11.0	
1	1,155	CCI 209	Rem. SP20						22.0	9.5
		CCI 209M	Rem. SP20						21.5	10.5
		Fio. 616	Rem. SP20						22.5	9.8
		Rem. 209P	Rem. SP20						21.5	9.0
			Win. WAA20F1					17.5	11.5	21.5 9.0
1	1,220	Win. 209	Rem. SP20							21.5 10.6
		CCI 209	Rem. SP20							23.0 10.3
		CCI 209M	Rem. SP20							22.5 10.9
		Fio. 616	Rem. SP20							23.5 11.0
		Rem. 209P	Rem. SP20							24.0 11.1
			Win. WAA20F1							23.5 10.9
		Win. 209	Rem. SP20							22.0 11.1


## 20-Gauge, 2 3/4 inch Rem. SP with Plastic Base Wad

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercos Grains Approx. x100	Blue Dot Grains Approx. x100	 Grains Approx. x100
7/8	1,200	Rem. 209	Rem. RXP20				16.5 9.1			
			Win. WAA20				16.5 9.8			
1	1,165	Rem. 209	Rem. SP20					17.5 11.3		
			Win. WAA20F1					17.5 10.7		
1	1,220	Rem. 209	Rem. SP20						23.0 10.3	
			Win. WAA20F1						24.0 10.1	

## 20-Gauge, 2 3/4 inch Rem.-Peters RXP Plastic Target Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercos Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
1	1,165	Rem. 97*	Fed. 20S1				15.5 10.8			
			Rem. RXP20				16.0 10.6			
			Win. WAA20				15.5 11.2			
1	1,220	Rem. 97*	Rem. RXP20					18.0 11.0		

## 20-Gauge, 2 3/4 inch Rem.-Peters Unibody Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercos Grains Approx. x100	Blue Dot Grains Approx. x100	 Grains Approx. x100
7/8	1,200	CCI 209M	Rem. RXP20				16.5 10.9	17.5 11.3		
		Fed. 209	Rem. RXP20				16.0 11.5	16.5 10.7		
		Rem. 209	Hornady Versalite					16.5 10.9		
			Rem. RXP20				16.5 10.8	16.5 10.2		
			Win. WAA20				16.5 11.2			
		Win. 209	Rem. RXP20					17.5 10.9		
1	1,165	CCI 209M	Rem. SP20						22.0 10.5	
		Fed. 209	Rem. SP20						21.5 10.5	
		Rem. 209	Rem. SP20						21.0 11.5	
			Win. WAA20F1						21.5 11.1	
		Win. 209	Rem. SP20						22.0 11.3	

## 20-Gauge, 2 3/4 inch Win.-Western Plastic AA-type Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercos Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
7/8	1,050	Win. 209	Win. WAA20			11.2 11.0				
7/8	1,100	Win. 209	Claybuster 1078-20			13.0 11.2				
			Win. WAA20				13.8 11.2			
			Win. WAA20F1			12.5 11.3				
7/8	1,155	CCI 209M	Win. WAA20				15.0 10.2			
		Win. 209	Claybuster 1078-20				15.0 10.2	16.0 10.5		
			PC20			13.5 11.2				
			Win. WAA20F1				15.0 11.0	16.0 11.0		
7/8	1,200	Win. 209	Claybuster 1078-20				16.0 11.2	16.5 11.0		
			PC20				16.0 11.2	16.5 11.3		
			Win. WAA20F1				15.5 11.2			
1	1,165	Win. 209	Rem. RXP20					16.5 9.6		
			Rem. SP20					16.5 10.0		
1	1,220	Win. 209	Rem. RXP20						23.0 11.3	
			Rem. SP20						23.5 11.4	
			Win. WAA20F1						23.0 11.5	

**CAN'T FIND THE ANSWER?  
VISIT THE ALLIANT WEB SITE.**

[www.alliantpowder.com](http://www.alliantpowder.com)

## 20-Gauge, 2 3/4 inch Win.-Western Plastic Xpert Ranger Shells (Polyformed Shell)

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercos Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
7/8	1,155	Win. 209	Fed. 20S1 Win. WAA20				14.5 9.7 14.5 9.8			
7/8	1,200	Win. 209	Fed. 20S1 Rem. RXP20 Win. WAA20				15.5 10.8 15.5 9.7 15.5 10.7			
1	1,165	Win. 209	Rem. RXP20				16.0 11.1			

## 20-Gauge, 3 inch Fed. Plastic Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercos Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
1	1,255	Fed. 209	Rem. RXP20 Win. WAA20						27.0 9.2 26.5 9.4	
1	1,310	Fed. 209	Fed. 20S1 Rem. RXP20 Win. WAA20						28.0 10.3 28.0 10.2 28.5 10.6	
1 1/8	1,230	Fed. 209	Rem. SP20 Win. WAA20F1						26.5 10.3 26.0 10.1	
1 1/4	1,185	Fed. 209	Rem. SP20 Win. WAA20F1						25.5 10.6 25.5 10.4	

## 28-Gauge, 2 3/4 inch Fed. Plastic Target Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercos Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
3/4	1,200	CCI 109	Rem. SP28 Win. WAA28			13.0 10.0 13.5 9.4	13.5 9.4 14.0 10.4	14.5 10.0 15.0 10.5	18.5 9.8 17.5 9.6	
		Fed. 209	Fed. 28S1A Rem. SP28 Win. WAA28			12.5 11.8 13.0 11.2 13.5 10.5	13.5 11.6 13.0 11.2 14.0 10.9	14.0 11.7 13.0 10.1 14.0 10.9	17.5 9.6 18.0 9.9 17.5 8.7	
3/4	1,295	Fed. 209	Rem. SP28						20.0 10.9	

## 28-Gauge, 2 3/4 inch Rem.-Peters Plastic Target Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercos Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
3/4	1,200	CCI 109	Fed. 28S1A Rem. SP28 Win. WAA28			13.0 11.8 12.0 10.2 12.0 10.4	14.0 10.9 13.0 9.1 13.0 9.1	14.5 10.7 14.0 8.9 14.0 8.3	18.5 10.1 18.0 7.5 18.0 7.3	
		Rem. 209P	Fed. 28S1A Rem. SP28 Win. WAA28			12.0 10.5 12.0 10.3	13.5 11.3 13.0 9.1 13.0 8.9	14.5 11.2 14.0 8.7 14.0 8.8	18.0 9.2 18.0 7.6 18.0 7.7	
3/4	1,295	Rem. 209P	Rem. SP28				15.0 10.6	16.5 10.3	21.0 9.7	

## 28-Gauge, 2 3/4 inch Remington Premier STS

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercos Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
3/4	1,200	Rem. 209P	Duster Red PC Blue				14.0 9.6 14.0 11.2	14.8 9.6 14.5 10.8	18.5 9.6	

## 28-Gauge, 2 3/4 inch Win.-Western Plastic AA-Type Shells

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Hercos Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
3/4	1,200	CCI 109	Win. WAA28				13.0 8.4 13.0 9.4	14.0 7.9 14.0 8.4		
		Win. 209	Win. WAA28			12.5 11.9				

## 410 Bore, 2 1/2 inch Fed. Plastic Shell

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Herco Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
1/2	1,200	Fed. 209	Fed. 410SC Rem. SP410 Win. WAA41							13.5 11.9 13.0 11.5 13.0 11.3 13.5 12.0
		Fed. 410	Fed. 410SC							

## 410 Bore, 2 1/2 inch Rem.-Peters Plastic Shell

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Herco Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
1/2	1,200	CCI 209	Fed. 410SC Rem. SP410 Win. WAA41							14.0 10.6 14.5 10.5 14.5 10.3 13.5 11.0 13.5 11.4 13.0 11.5 14.0 11.5
		CCI 209M Rem. 97*	Rem. SP410 Fed. 410SC Rem. SP410 Win. WAA41							

## 410 Bore, 2 1/2 inch Win.-Western Plastic AA-Type Shell

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Herco Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
1/2	1,200	CCI 209	Fed. 410SC Rem. SP410 Win. WAA41							13.0 12.1 13.5 12.0 13.0 11.7
		Win. 209	Win. WAA41							

## 410 Bore, 3 inch Rem.-Peters Plastic Shell

Shot Wt. (ounces)	Velocity	Primer	Wad	Red Dot Grains Approx. x100	American Select Grains Approx. x100	Green Dot Grains Approx. x100	Unique Grains Approx. x100	Herco Grains Approx. x100	Blue Dot Grains Approx. x100	2400 Grains Approx. x100
2/3	1,135	CCI 209M	Rem. SP410							14.5 12.2 14.0 12.7 14.5 12.6 14.5 13.0 14.5 12.3
		Fed. 410	Rem. SP410							
		Rem. 97*	Fed. 410SC Rem. SP410 Win. WAA41							

# America's Clean Team



Alliant Powder P.O. Box 6, Radford, VA 24143-0006 Phone: 800-276-9337  
Web site: [www.alliantpowder.com](http://www.alliantpowder.com)

# PROMO™ RELOADING DATA

PROMO™ is Alliant's budget priced 12 gauge target shotshell powder. Available in 8 pound containers only, it provides economical loads that are reliable and consistent, shot after shot.

Note - To determine the proper bushing size for PROMO™ shotshell powder, be sure to use the following procedure:

- Select a bushing 2 sizes smaller than the one recommended for the same number of gains of Red Dot® from the manufacturers' bushing chart, then...
- Place this bushing in your reloading machine and weigh several charges on your powder scales, then...
- Compare the weighed charge to the recommended charge weight.
- Adjust the bushing size if necessary to obtain the desired charge weight.
- Confirm your bushing size with each new powder lot.
- We recommend this same procedure for confirming the correct bushing size for each new lot of PROMO.™
- With all powders, you should routinely verify your powder charge using an accurate powder scale.

All data are for 12 gauge, 2-3/4 inch shells

Shot Weight	Shell	Velocity (FPS)	Primer	Wad	Promo Grains
1	Federal Gold Medal	1,200	Fed. 209A	Fed12S0	18
1	Federal Gold Medal	1,200	Fed. 209A	WAA12 SL	18
1	Federal Gold Medal	1,200	Fed. 209A	Claybuster 1100-12	18
1	Federal Gold Medal	1,255	Fed. 209A	Fed12S0	19
1	Federal Gold Medal	1,255	Fed. 209A	WAA12 SL	18.5
1	Federal Gold Medal	1,255	Fed. 209A	Claybuster 1100-12	18.5
1	Remington STS, Nitro 27 & Premier	1,200	Rem. 209P	Rem. TGT12	18
1	Remington STS, Nitro 27 & Premier	1,200	Rem. 209P	Claybuster 1100-12	18
1	Remington STS, Nitro 27 & Premier	1,200	Rem. 209P	Purple PC	18.5
1	Remington STS, Nitro 27 & Premier	1,255	Rem. 209P	Rem. TGT12	19
1	Remington STS, Nitro 27 & Premier	1,255	Rem. 209P	Claybuster 1100-12	19.5
1	Remington STS, Nitro 27 & Premier	1,255	Rem. 209P	Purple PC	19.5
1	Winchester AA	1,200	Win. 209	WAA12 SL	18
1	Winchester AA	1,200	Win. 209	Claybuster 1100-12	18
1	Winchester AA	1,200	Win. 209	Purple PC	18
1	Winchester AA	1,255	Win. 209	WAA12 SL	19
1	Winchester AA	1,255	Win. 209	WAA12 SL	19
1	Winchester AA	1,255	Win. 209	Claybuster 1100-12	19
1	Winchester AA	1,255	Win. 209	Purple PC	19
1 1/8	Winchester AA	1,145	Fed. 209A	Fed. 12S3	18
1 1/8	Winchester AA	1,145	Fed. 209A	WAA12 (white)	17.5
1 1/8	Winchester AA	1,145	Fed. 209A	Claybuster 3118-12	18
1 1/8	Winchester AA	1,200	Fed. 209A	Fed. 12S3	19.5
1 1/8	Winchester AA	1,200	Fed. 209A	WAA12 (white)	19
1 1/8	Winchester AA	1,200	Fed. 209A	Claybuster 3118-12	19
1 1/8	Remington STS, Nitro 27 & Premier	1,145	Rem. 209P	Figure 8	18
1 1/8	Remington STS, Nitro 27 & Premier	1,145	Rem. 209P	Windjammer	17.5
1 1/8	Remington STS, Nitro 27 & Premier	1,145	Rem. 209P	Claybuster 3118-12	17.5
1 1/8	Remington STS, Nitro 27 & Premier	1,145	Rem. 209P	Red PC	17.5
1 1/8	Remington STS, Nitro 27 & Premier	1,200	Rem. 209P	Figure 8	19
1 1/8	Remington STS, Nitro 27 & Premier	1,200	Rem. 209P	Windjammer	18.5
1 1/8	Remington STS, Nitro 27 & Premier	1,200	Rem. 209P	Claybuster 3118-12	19
1 1/8	Remington STS, Nitro 27 & Premier	1,200	Rem. 209P	Windjammer	19.5
1 1/8	Winchester AA	1,145	Win. 209	WAA12 (white)	17
1 1/8	Winchester AA	1,145	Win. 209	Figure 8	17.5
1 1/8	Winchester AA	1,145	Win. 209	Windjammer	17.5
1 1/8	Winchester AA	1,145	Win. 209	Claybuster 3118-12	17
1 1/8	Winchester AA	1,145	Win. 209	Red PC	17.5
1 1/8	Winchester AA	1,200	Win. 209	WAA12 (white)	18
1 1/8	Winchester AA	1,200	Win. 209	Figure 8	18.5
1 1/8	Winchester AA	1,200	Win. 209	Windjammer	18.5
1 1/8	Winchester AA	1,200	Win. 209	Claybuster 3118-12	18
1 1/8	Winchester AA	1,200	Win. 209	Red PC	18.5



# ROLL YOUR OWN.™

Reloading with Alliant is one fun-filled pastime that pays you back over and over again. For openers, there's the fun of getting your ammo just the way you want it, with outstanding performance you can depend on every single time. Plus, reloading is a natural extension of your favorite pastime - another great way to enjoy the shooting sports. But the best fun of all is getting the whole family involved in a wholesome, all-American activity. Give it a try. When you reload with Alliant, it's loads of fun.



Alliant Powder, P.O. Box 6, Radford, Virginia 24143-0006 Phone: 800-276-9337 Web site: [www.alliantpowder.com](http://www.alliantpowder.com)

# ALLIANT SHOTSHELLS ALL-TIME FAVORITES RED DOT, GREEN DOT



**Red Dot®.** Now  
CLEANER BURNING!  
America's #1 choice,  
for clay target loads and  
now, 50% cleaner.  
Since 1932, more 100  
straights than any other  
powder. *Available in  
8-lb., 4-lb., and 1-lb.  
canisters.*



**Green Dot®.** Now  
CLEANER BURNING!  
It delivers precise  
burn rates for uniformly  
tight patterns, and  
you'll appreciate the  
lower felt recoil.  
Versatile for target and  
field. *Available in  
8-lb., 4-lb., and  
1-lb. canisters.*



**PROMO.** America's #1  
economy-priced 12 ga.  
target powder. Promo  
has the same burn speed  
as Red Dot, but is more  
dense, thus requiring a  
smaller bushing to  
obtain the same charge  
weight. *Available in  
8-lb. canister only.*



**Blue Dot®.** The powder  
of choice for magnum  
lead shotshell loads.  
10, 12, 16, and 20 gauge.  
Consistent and accurate.  
Doubles as magnum  
handgun load.  
*Available in 5-lb.,  
and 1-lb. canisters.*

# POWDERS ARE #1! AND UNIQUE ARE 50% CLEANER BURNING.



## **American Select®.**

Our newest "ultra clean" burning premium powder makes a versatile target load and superior 1-oz. load for improved clay target scores. Great for Cowboy Action handgun loading too! *Available in 8-lb., 4-lb., and 1-lb. canisters.*



## **Steel®. ALL NEW!**

Special, new powder for waterfowl shotshell gives steel shot high velocity within safe pressure limits for 10 and 12 gauge loads. *Available in 4-lb. and 1-lb. canisters.*



**Herco®.** Since 1920, a proven powder for heavy shotshell loads, including 10, 12, 16, 20 and 28 gauge target loads. The ultimate in 12 gauge, 1-1/4 oz. upland game loads. *Available in 8-lb., 4-lb., and 1-lb. canisters.*



**Unique®.** Now CLEANER BURNING! Most versatile shotgun/handgun powder made. Great for 12, 16, 20 and 28 gauge loads. Use with most hulls, primers and wads. *Available in 8-lb., 4-lb., and 1-lb. canisters.*

# ALLIANT. PROVEN POW

<i>Powder</i>	<i>Relative Quickness</i>	<i>Principal Purpose</i>	<i>Secondary Uses</i>
 <b>BULLSEYE®</b>	100%	Handgun Loads	12 ga. Light Target Loads
 <b>RED DOT®</b>	94.1%	Light & Standard 12 & 16 ga. Target Loads	Handgun Loads
 <b>PROMO®</b>	94.1%	Light & Standard 12 & 16 ga. Target Loads	Handgun Loads
 <b>AMERICAN SELECT®</b>	81.0%	12 ga. Target Loads	Cowboy Action Handgun Loads
 <b>GREEN DOT®</b>	77.9%	Handicap Trap Loads	20 & 28 ga. Target Loads
 <b>UNIQUE®</b>	61.6%	All-around Shotshell Powder, 12, 16 & 20 ga.	Handgun Loads
 <b>POWER PISTOL®</b>	58.6%	High Performance 9mm, .40 S&W & 10mm	Moderate Pistol Cartridges
 <b>HERCO®</b>	56.1%	Heavy Shotshell Loads 10,12, 16, 20 & 28 ga.	Heavy Handgun Loads
 <b>BLUE DOT®</b>	37.8%	Magnum Shotshell Loads, 10, 12, 16, 20 & 28 ga.	Magnum Handgun Loads
 <b>STEEL®</b>	34.0%	Non-Toxic Hunting Shotshell	2 oz. Turkey Loads
 <b>2400®</b>	27.0%	Magnum Handgun Loads	.22 Hornet & 218 Bee
 <b>RELODER® 7</b>	19.4%	Light Rifle	45-70 Gov't
 <b>RELODER® 15</b>	13.7%	Medium Rifle	Silhouette Rifle
 <b>RELODER® 19</b>	11.3%	Standard Rifle	Light Magnum Rifle
 <b>RELODER® 22</b>	11.1%	Magnum Rifle	Heavy Bullet Stand Rifle
 <b>RELODER® 25</b>	10.5%	Heavy Magnum Rifle	Magnum Rifle

# ERS FOR RELOADERS.

## Remarks

America's best pistol powder. Unsurpassed for .45 ACP target loads

The Number 1 premium clay target powder, now 50% cleaner burning

New, economical target shotshell powder

Premium Ultra Clean Burning target powder, excellent patterns and less felt recoil

Best long range clay target powder creating tight and uniform patterns

The world's most versatile reloading powder

Best choice for high performance 9mm, .40 S&W, and 10mm

Outstanding 12 ga. heavy hunting and target loads

Powder of choice for magnum hunting loads

NEW! The only powder designed specifically for Steel Shotshell and other non-toxic shot

Legendary for its performance in .44 Mag and other magnum pistol loads

The right choice for use in Varmint calibers using light-weight bullets

Excellent in short action calibers

Superb in 30-06 and .338 Win Mag

Outstanding in 7mm Mag and .300 Win Mag applications

NEW! Delivers High Energy for Weatherby Magnums and other large capacity cartridges



POWDER

for by Design

# ALLIANT RIFLE & HANDGUN POWDERS: GRE INCLUDING A NEW HEAVY MA



**Bullseye®.** America's best known pistol powder. Unsurpassed for .45 ACP target loads. *Available in 8-lb., 4-lb., and 1-lb. canisters.*



**Power Pistol®.** Designed for high performance in semi-automatic pistols and is the powder of choice for 9mm, .40 S&W and .357 SIG. *Available in 4-lb. and 1-lb. canisters.*



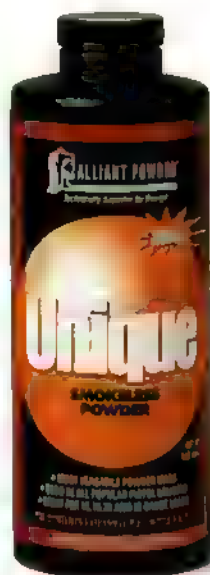
**Reloder 15®.** The best all-around medium speed rifle powder. It provides excellent .223 and .308 cal. performance. Selected as the powder for U.S. Military's M118 Special Ball Long Range Sniper Round. *Available in 5-lb. and 1-lb. canisters.*



**Reloder 19®.** Provides superb accuracy in most medium and heavy rifle loads and is the powder of choice for 30-06 and .338 calibers. *Available in 5-lb. and 1-lb. canisters.*

# CHOICES FOR TARGET & HUNTING LOADS, MAGNUM POWDER FOR BIG GAME.

**400®.** Legendary for its performance in .44 magnum and other magnum pistol loads. Originally developed for the .22 Hornet, it's also the shooter's choice for .410 bore. *Available in 8-lb., 4-lb., and 1-lb. canisters.*



**Unique®.** Now CLEANER BURNING! Most versatile shotgun/handgun powder made. Great for 12, 16, 20 and 28 gauge loads. Use with most hulls, primers and wads. *Available in 8-lb., 4-lb., and 1-lb. canisters.*



**Reloder 7®.** Designed for small caliber varmint loads, it meters consistently, and meets the needs of the most demanding bench rest shooter. Great in .45-70 and .450 Marlin. *Available in 5-lb. and 1-lb. canisters.*



**Reloder 22®.** This top performing powder for big game loads provides excellent metering, and is the powder of choice for .270, 7mm magnum and .300 Win. magnum. *Available in 5-lb. and 1-lb. canisters.*



**Reloder 25®.** This new, advanced powder for big game hunting features improved slower burning, and delivers the high energy that heavy magnum loads need. *Available in 5-lb. and 1-lb. canisters.*



**THE POWDERS BORN IN A 19TH CENTURY BLACK POWDER FACTORY  
NOW COME TO YOU FROM THE MOST ADVANCED SMOKELESS  
PRODUCTION POWDER MAKING FACILITY IN THE WORLD.**

The long, proud history of Alliant Powder began in 1872 as Laflin & Rand, later to become Hercules Powder Company – the most respected name in the reloading industry.

Now with a new name and a new facility, Alliant Powder operates the most technically advanced powder plant in the world. Our ISO Certification confirms our continued dedication to produce the most technically advanced powders anywhere.

This nearly century-old jar of powder still performs to its original specs. It sits in our lab as a reminder of a long, proud tradition and commitment to consistency. Never forgetting that reloaders must be able to count on consistent performance from their powders, year after year, lot after lot, shot after shot.



Alliant Powder, P.O. Box 6, Radford, Virginia 24143-0006 Phone 800-276-9437 Web site [www.alliantpowder.com](http://www.alliantpowder.com)

# INTERNATIONAL LOADS

## 4-Gram International Target Loads with 2-Gauge, 2¾ with Fed. Gold Medal Plastic Target Shells

Gram equiv.	Velocity (fps)	Primer	Wad	Red Dot		American Select		Green Dot	
				Grains	Approx. psi x100	Grains	Approx. psi x100	Grains	Approx. psi x100
1/2	1,345	Fed. 209A	Claybuster 1100-12	20.0	8.7	21.0	8.0		
			Fed. 12SO	20.0	8.9	20.5	7.9		
			Purple PC	19.5	8.7				
			Rem. TGT 12	20.5	8.9	21.0	8.1		
			Win. WAA12L (Gray)	20.0	9.0	21.5	8.1		

## 4-Gram International Target Loads with 2-Gauge, 2¾ with Fiocchi Plastic Target Shells

Gram equiv.	Velocity (fps)	Primer	Wad	Red Dot		American Select		Green Dot	
				Grains	Approx. psi x100	Grains	Approx. psi x100	Grains	Approx. psi x100
1/2	1,345	Fio. 616	Fed. 12SO	20.5	8.7	22.0	7.8		
			Purple PC			22.5	6.9		
			Rem. TGT 12	20.5	8.2	22.0	7.6		
			Win. WAA12L (Gray)	21.0	8.5	22.0	7.5		

## 4-Gram International Target Loads with 2-Gauge, 2¾ with Rem. Premier, STS Plastic Target Shells

Gram equiv.	Velocity (fps)	Primer	Wad	Red Dot		American Select		Green Dot	
				Grains	Approx. psi x100	Grains	Approx. psi x100	Grains	Approx. psi x100
1/2	1,345	Rem. 209P	Claybuster 1100-12	20.5	8.8	20.5	8.7		
			Fed. 12SO	20.0	9.8	20.5	9.6		
			Purple PC	20.5	8.3	21.0	8.1		
			Rem. TGT 12	20.5	9.2	20.5	8.5		
			Win. WAA12L (Gray)	20.5	9.8	20.5	8.7		

## 4-Gram International Target Loads with 2-Gauge, 2¾ with Win. AA Plastic Target Shells

Gram equiv.	Velocity (fps)	Primer	Wad	Red Dot		American Select		Green Dot	
				Grains	Approx. psi x100	Grains	Approx. psi x100	Grains	Approx. psi x100
1/2	1,345	Win. 209	Claybuster 1100-12	20.0	9.6	20.5	8.7		
			Fed. 12SO	20.0	10.1	20.5	9.1		
			Purple PC	20.0	9.0	21.0	8.1		
			Rem. TGT 12	20.0	9.6	20.5	8.6		
			Win. WAA12L (Gray)	20.0	10.2	20.5	9.7		

## 28-Gram International Target Loads with 12-Gauge, 2¾ with Fed. Gold Medal Plastic Target Shells

Gram equiv.	Velocity (fps)	Primer	Wad	Red Dot		American Select		Green Dot	
				Grains	Approx. psi x100	Grains	Approx. psi x100	Grains	Approx. psi x100
3 1/2	1,345	Fed. 209A	Fed. 12SO	23.0	9.9			24.5	9.1
			Purple PC	23.0	8.8			25.0	8.2
			Rem. Fig. 8	22.5	9.5			25.0	8.4
			Win. WAA12SL	22.5	9.6			24.5	8.4

## 28-Gram International Target Loads with 12-Gauge, 2¾ with Fiocchi Plastic Target Shells

Dram Equiv.	Velocity (fps)	Primer	Wad	Red Dot		American Select		Green Dot	
				Grains	Approx. psi x100	Grains	Approx. psi x100	Grains	Approx. psi x100
3 1/2	1,345	Fio. 616	Fed. 12S3	22.0	9.6			24.0	8.8
			Purple PC	22.5	9.5			24.0	8.8
			Rem. Fig. 8	21.5	9.7			24.0	8.8
			Win. WAA12SL	21.5	10.4			24.0	8.8

## 28-Gram International Target Loads with 12-Gauge, 2¾ with Rem. Premier Plastic Target Shells

Dram Equiv.	Velocity (fps)	Primer	Wad	Red Dot		American Select		Green Dot	
				Grains	Approx. psi x100	Grains	Approx. psi x100	Grains	Approx. psi x100
3 1/2	1,345	Rem. 209P	Fed. 12S3					23.0	10.3
			Purple PC	21.5	10.6			24.0	9.9
			Rem. Fig. 8	21.5	10.6			23.0	9.7
			Win. WAA12SL					23.0	10.1

## 28-Gram International Target Loads with 12-Gauge, 2¾ with Win.-Western Plastic AA-Type Shells

Dram Equiv.	Velocity (fps)	Primer	Wad	Red Dot		American Select		Green Dot	
				Grains	Approx. psi x100	Grains	Approx. psi x100	Grains	Approx. psi x100
3 1/2	1,345	Win. 209	Fed. 12S3					23.0	9.5
			Purple PC					22.5	10.6
			Rem. Fig. 8						
			Win. WAA12SL						



**TO GET  
THERE,  
START  
HERE.**



If you're serious about breaking targets, start with Alliant powder. It's value priced and performs consistently, batch after batch. Reload with Alliant, you can't lose.

# STEEL SHOTSHELL RELOADING DATA

**WARNING:** Reloading steel shotshells requires strict adherence to Alliant published reloading specifications. The reloading specifications provided in this publication were derived through the use of controlled laboratory conditions. While reloading steel shotshells, the reloader must adhere precisely to all the components, without exception, set forth in the load data and specifications. Alliant recommends that both powder charge and shot charge be individually weighed to insure compliance to the load data. Steel shotshells should only be used in well maintained firearms that are designed to shoot steel shot loads. Alliant recommends that commercially available shotshell sealant be applied to both the primer and crimp areas to prevent moisture penetration.

## Steel Shot Only 10-Gauge, 3 1/2-inch Shells

Shell Type	Wad	Primer	Shot Weight (ounces)	Velocity (fps)	STEEL Grains	Approx. Pressure (x100)
Remington (yellow plastic base wad)	Precision Reloading TUFW105	Fed. 209A	1 1/4	1,590	50.0	9.8
Remington (yellow plastic base wad)	Ballistic Products mm10312	Fed. 209A	1 5/8	1,310	37.0	10.1
Remington Plastic SP	Precision Reloading TUFW105	Fed. 209A	1 3/8	1,475	43.5	10.0
Remington Plastic SP	Ballistic Products mm10312	Fed. 209A	1 3/8	1,535	46.0	10.1
Remington Plastic SP	Reloading Specialties "SAM 1"	Fed. 209A	1 3/8	1,555	48.0	10.3
Remington Plastic SP	Precision Reloading TUFW105	Fed. 209A	1 1/2	1,345	37.5	10.3
Remington Plastic SP	Ballistic Products mm10312	Fed. 209A	1 1/2	1,385	39.0	10.1
Remington Plastic SP	Reloading Specialties "SAM 1"	Fed. 209A	1 1/2	1,470	45.0	10.1
Winchester Polyformed	Rel. Specialties "Sam 1" 10 ga 3 1/2"	Fed. 209A	1 3/8	1,538	45.5	10.2
Winchester Polyformed	Rel. Specialties "Sam 1" 10 ga 3 1/2"	Fed. 209A	1 1/2	1,415	41.0	9.9

## Steel Shot Only 12-Gauge, 2 3/4-inch Shells

Shell Type	Wad	Primer	Shot Weight (ounces)	Velocity (fps)	STEEL Grains	Approx. Pressure (x100)
Federal Gold Medal	Reloading Specialties "SAM 1"	Fed. 209A	7/8	1,700	42.0	7.8
Federal Gold Medal	Ballistic Products mm12234	Fed. 209A	7/8	1,765	45.0	9.0
Federal Gold Medal	Ballistic Products mm12234	Fed. 209A	1	1,480	33.0	9.5
Federal Gold Medal	Precision Reloading TUFW12	Fed. 209A	1	1,500	37.0	8.0
Federal Gold Medal	Reloading Specialties "SAM 1"	Fed. 209A	1	1,520	36.0	9.2
Federal Gold Medal	Reloading Specialties "SAM 1"	Fed. 209A	1 1/8	1,380	32.0	9.0
Federal Gold Medal	Precision Reloading TUFW12	Fed. 209A	1 1/8	1,425	32.0	9.6
Remington Nitro Mag	Precision Reloading TUFW12	Fed. 209A	1	1,520	35.5	10.8
Remington Nitro Mag	Reloading Specialties "SAM 1"	Fed. 209A	1	1,546	35.5	10.3
Remington Nitro Mag	Precision Reloading TUFW12	Fed. 209A	1 1/8	1,361	29.5	10.4
Remington Nitro Mag	Reloading Specialties "SAM 1"	Fed. 209A	1 1/8	1,428	32.5	10.4

## Steel Shot Only 12-Gauge, 3 inch Shells

Shell Type	Wad	Primer	Shot Weight (ounces)	Velocity (fps)	STEEL Grains	Approx. Pressure (x100)
Federal 0.090 Integral Base Wad	Precision Reloading TUFW123	Fed. 209A	1	1,660	44.0	9.4
Federal 0.090 Integral Base Wad	Ballistic Products mm12300	Fed. 209A	1	1,690	45.0	10.5
Federal 0.090 Integral Base Wad	Reloading Specialties "SAM 1"	Fed. 209A	1	1,720	47.0	8.9
Federal 0.090 Integral Base Wad	Ballistic Products mm12300	Fed. 209A	1 1/8	1,510	37.0	10.4
Federal 0.090 Integral Base Wad	Precision Reloading TUFW123	Fed. 209A	1 1/8	1,515	38.0	10.9
Federal 0.090 Integral Base Wad	Reloading Specialties "SAM 1"	Fed. 209A	1 1/8	1,580	40.5	10.7
Federal 0.090 Integral Base Wad	Precision Reloading TUFW123	Fed. 209A	1 1/4	1,355	33.0	10.5
Federal 0.090 Integral Base Wad	Ballistic Products mm12300	Fed. 209A	1 1/4	1,370	33.0	10.5
Federal 0.090 Integral Base Wad	Reloading Specialties "SAM 1"	Fed. 209A	1 1/4	1,455	37.0	10.8
Federal Hi-Power 7/16 Base Wad	Ballistic Products mm12300	Fed. 209A	1	1,665	45.0	8.9
Federal Hi-Power 7/16 Base Wad	Reloading Specialties "SAM 1"	Fed. 209A	1	1,700	48.0	8.2
Federal Hi-Power 7/16 Base Wad	Ballistic Products mm12300	Fed. 209A	1 1/8	1,550	39.5	10.6
Federal Hi-Power 7/16 Base Wad	Reloading Specialties "SAM 1"	Fed. 209A	1 1/8	1,560	40.5	10.5
Federal Hi-Power 7/16 Base Wad	Ballistic Products mm12300	Fed. 209A	1 1/4	1,390	33.0	10.9
Federal Hi-Power 7/16 Base Wad	Reloading Specialties "SAM 1"	Fed. 209A	1 1/4	1,430	36.0	10.5
Remington Nitro Steel	Ballistic Products mm12300	Fed. 209A	1 1/8	1,440	33.5	10.8
Remington Nitro Steel	Precision Reloading TUFW123	Fed. 209A	1 1/8	1,457	35.0	10.7
Remington Nitro Steel	Reloading Specialties "SAM 1"	Fed. 209A	1 1/8	1,479	33.0	10.6
Remington Nitro Steel	Precision Reloading TUFW123	Fed. 209A	1 1/4	1,392	32.0	10.7

# STEEL SHOTSHELL RELOADING DATA

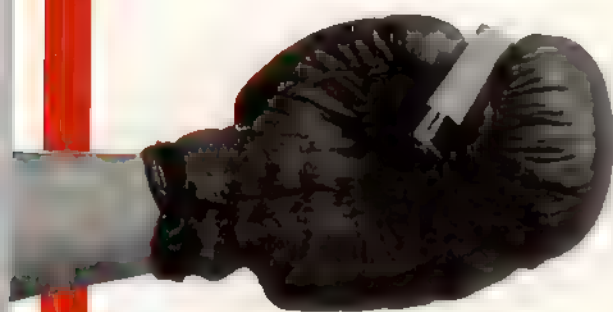
**WARNING:** Reloading steel shotshells requires strict adherence to Alliant published reloading specifications. The reloading specifications provided in this publication were derived through the use of controlled laboratory conditions. While reloading steel shotshells, the reloader must adhere precisely to all the components, without exception, set forth in the load data and specifications. Alliant recommends that both powder charge and shot charge be individually weighed to insure compliance to the load data. Steel shotshells should only be used in well maintained firearms that are designed to shoot steel shot loads. Alliant recommends that commercially available shotshell sealant be applied to both the primer and crimp areas to prevent moisture penetration.

## Steel Shot Only

### 12-Gauge, 3 1/2-inch Shells

Shell Type	Wad	Primer	Shot Weight (ounces)	Velocity (fps)	STEEL Grains	Approx. Pressures (x100)
Federal Integral Base Wad	Reloading Specialties "SAM 1"	Fed. 209A	1 1/4	1,510	45.0	10.4
Federal Integral Base Wad	Ballistic Products mm12312	Fed. 209A	1 1/4	1,560	45.0	10.9
Federal Integral Base Wad	Precision Reloading TUFW1235	Fed. 209A	1 1/4	1,565	45.0	10.7
Federal Integral Base Wad	Precision Reloading TUFW1235	Fed. 209A	1 3/8	1,470	40.0	12.5
Federal Integral Base Wad	Ballistic Products mm12312	Fed. 209A	1 3/8	1,485	41.5	12.6
Federal Integral Base Wad	Precision Reloading TUFW1235	Fed. 209A	1 1/2	1,360	36.0	12.6
Federal Integral Base Wad	Ballistic Products mm12312	Fed. 209A	1 1/2	1,385	37.0	12.8
Federal Integral Base Wad	Reloading Specialties "SAM 1"	Fed. 209A	1 1/2	1,390	39.0	13.3
Remington Plastic SP	Reloading Specialties "SAM 1"	Fed. 209A	1 1/4	1,595	45.0	13.1
Remington Plastic SP	Ballistic Products mm12312	Fed. 209A	1 1/4	1,615	45.0	13.3
Remington Plastic SP	Ballistic Products mm12312	Fed. 209A	1 3/8	1,430	37.0	12.8
Remington Plastic SP	Reloading Specialties "SAM 1"	Fed. 209A	1 3/8	1,430	38.5	12.8
Remington Plastic SP	Ballistic Products mm12312	Fed. 209A	1 1/2	1,305	33.0	13.0
Remington Plastic SP	Reloading Specialties "SAM 1"	Fed. 209A	1 1/2	1,330	35.0	13.0

## FINALLY A POWDER THAT GIVES STEEL HEAVYWEIGHT PUNCH.



Introducing the first powder for waterfowl shotshell reloaders to address the critical technical demands of reloading with steel shot. STEEL™ delivers high velocity within safe pressure limits for 10, 12, and 20 gauge loads.



# BUCKSHOT RELOADING

## 10-Gauge, 3 1/2 inch Fed. Plastic Shell Buckshot Loads

Manufacturer	Shell	No. and Size Buckshot	Velocity (fps)	Wad	Unique Grains Approx psi (x100)	Herco Grains Approx psi (x100)	Blue Dot Grains Approx psi (x100)	2400 Grains Approx psi (x100)
Fed. 209	Fed. Plastic Shell	40-4's	1,275	SP10+.270 in. 20 ga. Card			45.0 10.1	
		17-0's	1,300	SP10+.135 in. 20 ga. Card			46.0 10.0	
Rem. 57*	Rem. Plastic Shell	40-4's	1,275	SP10+.270 in. 20 ga. Card			46.0 10.1	
		17-0's	1,300	SP10+.135 in. 20 ga. Card			48.5 9.8	
Win. 209	Win.-Western Plastic Shell	40-4's	1,275	SP10+.270 in. 20 ga. Card			47.5 10.0	
		17-0's	1,300	SP10			51.0 9.5	

## 12-Gauge, 3 inch Fed. Buckshot Loads

Manufacturer	Shell	No. and Size Buckshot	Velocity (fps)	Wad	Unique Grains Approx psi (x100)	Herco Grains Approx psi (x100)	Blue Dot Grains Approx psi (x100)	2400 Grains Approx psi (x100)
Fed. 209	Hi Power Shell	18-1's	1,225	Bal. Prod. GS&SC			36.0 9.7	
		33-4's	1,250	Bal. Prod. GS&SC			37.0 10.5	50.0 8.1
		12-0's	1,275	RP12+.200 in. 20 ga. Card		31.5 9.8		
Rem. 97*	Unibody Shell	18-1's	1,225	Bal Prod GS&SC			35.5 9.8	
		33-4's	1,250	Bal Prod GS&SC				46.0 9.4
		12-0's	1,275	RP12+.200 in. 20 ga. Card		29.5 10.0		

## 10-Gauge, 2 3/4 inch Fed. Hi Power Plastic Buckshot Loads

Manufacturer	Shell	No. and Size Buckshot	Velocity (fps)	Wad	Unique Grains Approx psi (x100)	Herco Grains Approx psi (x100)	Blue Dot Grains Approx psi (x100)	2400 Grains Approx psi (x100)
Fed. 209	Fed. Hi Power Plastic Shell	24-3's	1,200	Rem. SP20 Petals Removed			24.0 11.2	
		18-4's	1,275	Rem. SP20		19.0 11.0	25.0 9.3	
		12-1's	1,275	Rem. SP20 Petals Removed			25.5 10.1	
Win. 209	Win.-Western AA-Type Shell	18-4's	1,275	Rem SP20			24.0 9.6	
		12-1's	1,275	Rem. SP20 Petals Removed			25.5 10.4	

## 10-Gauge, 3 inch Fed. Buckshot Loads

Manufacturer	Shell	No. and Size Buckshot	Velocity (fps)	Wad	Unique Grains Approx psi (x100)	Herco Grains Approx psi (x100)	Blue Dot Grains Approx psi (x100)	2400 Grains Approx psi (x100)
Fed. 209	Hi Power Plastic Shell	18-3's	1,220	Rem. RXP20		19.5 8.4		
		21-3's	1,220	Rem. SP20			26.0 7.8	
Win. 209	AA-Type Shell	21-3's	1,200	Rem. RP20			25.0 9.4	
		18-3's	1,220	Win. WAA20F1		19.0 9.5		

LOOKING FOR A NEW RECIPE?  
VISIT THE ALLIANT WEB SITE.

[www.alliantpowder.com](http://www.alliantpowder.com)

# RIFLED SLUG LOADS

## 12-Gauge, 2 3/4 inch Federal Gold Medal

Slug Wt.	Primer	Velocity (fps)	Wad	Grains	Hercos Approx psi (x100)	Grains	Blue Dot Approx psi (x100)
1 oz., Lee	Fed. 209A	1,538	Win. WAA12 (White)	34.0	10.4	49.0	10.2
1 oz., Lee	Fed. 209A	1,690	Win. WAA12 (White)				

## 12-Gauge, 2 3/4 inch Remington Premier, STS

Slug Wt.	Primer	Velocity (fps)	Wad	Grains	Hercos Approx psi (x100)	Grains	Blue Dot Approx psi (x100)
1 oz., Lee	Win. 209	1,522	Win. WAA12 (White)	34.0	10.4	49.0	10.2
1 oz., Lee	Win. 209	1,673	Win. WAA12 (White)				

## 12-Gauge, 2 3/4 inch Winchester AA

Slug Wt.	Primer	Velocity (fps)	Wad	Grains	Hercos Approx psi (x100)	Grains	Blue Dot Approx psi (x100)
1 oz., Lee	Win. 209	1,587	Win. WAA12 (White)	36.0	10.6		

**ALLIANT POWDERS.**  
**WE HAVEN'T CHANGED**  
**THEM IN 100 YEARS...**  
**EXCEPT TO**  
**MAKE THEM BETTER.**



Alliant Powder, P.O. Box 6, Radford, Virginia 24143-0006 Phone: 800-276-9337  
 Web site: [www.alliantpowder.com](http://www.alliantpowder.com)

# PISTOL/REVOLVER RELOADING DATA



## Pistol and Revolver Loads

Cartridge/Bullet	Primer	Min. OAL (inches)	Ball Length	Bullseye Chg Wt	Red Dot Chg Wt	American Select Chg Wt	Green Dot Chg Wt	Unique Chg Wt	Power Pistol Chg Wt	Hercu Chg Wt	Blue Dot Chg Wt	2400 Chg Wt
.25 Auto	Rem. SP 1.5	0.875 2		1.3	760 15.0	1.1	740 15.5					
50 FMC								1.7	735 15.6			
.32 Auto	Rem. SP 1.5	0.984 4		2.2	835 12.5	2.1	805 12.9					
71 FMC								3.2	880 13.5			
.32 H&R Mag.												
85 JHP	Fed. 100	1.32 5		3.4	1,020 18.7	3.4	1,030 19.2	4.1	1,050 18.7	4.6	1,060 18.9	6.6 1,100 19.0
90 LWC	Fed. 100	1.18 5		3.3	1,060 19.6	3.1	1,020 20.0	3.3	1,050 20.4	4.0	1,070 20.4	5.1 1,150 20.4
90 LWC (target)	Fed. 100	1.1 5		2.2	800 9.5	2.1	800 9.4	2.2	805 9.6	2.8	805 8.5	3.7 805 7.8
98 LRN	Fed. 100	1.32 5		3.4	1,020 19.5	3.1	980 19.7	3.5	1,010 19.6			
9mm Luger												
95 FMJ	Win. W.S.P.	1.055 4		5.5	1,295 31.4	5.3	1,285 32.1	6.0	1,280 32.2	6.8	1,225 24.4	8.3 1,180 22.0
115 FMJ	Win. W.S.P.	1.12 4		5.0	1,180 31.0	4.5	1,150 32.6	5.2	1,135 32.8	6.3	1,180 28.7	8.0 1,190 29.2
115 JHP	Win. W.S.P.	1.14 4		4.9	1,155 32.0	4.6	1,145 33.0	4.7	1,050 33.1	6.5	1,180 32.7	8.2 1,170 29.9
125 FMJ	Win. W.S.P.	1.15 4		4.9	1,165 32.1	4.5	1,145 32.0	5.2	1,165 32.1	6.2	1,165 28.5	8.2 1,190 29.7
125 L	Win. W.S.P.	1.15 4		3.7	890 32.7	3.4	895 32.4	3.9	912 31.9	4.9	1,010 30.5	6.2 1,050 30.2
147 XTP	Win. W.S.P.	1.14 4		4.2	1,010 32.9							
9X18mm Makarov												
95 JHP	Win. W.S.P.	0.965 4		3.6	970 21.2			4.7	1,010 21.6			
100 JPI	Win. W.S.P.	0.965 4		3.6	960 21.1	3.1	905 21.3	4.7	995 21.4			
100 LRN	Win. W.S.P.	0.965 4		3.2	920 21.0	2.7	865 21.3	4.3	985 20.9			
.357 Mag.												
110 JHP	Fed. 200	1.56 5.6		9.0	1,690 31.7	7.7	1,560 34.0	10.0	1,735 34.1	13.0	1,885 33.3	16.0 2,040 33.8
125 JSP	Fed. 200	1.57 5.6		8.4	1,550 32.8	7.0	1,410 34.0	9.6	1,585 33.8	9.8	1,590 33.6	14.5 1,795 34.0
148 LWC	Fed. 200	1.33 5.6		5.7	1,475 34.0	4.6	1,300 33.6	6.4	1,465 33.8	6.7	1,510 33.9	
148 LWC (target)	Fed. 200	1.33 5.6		2.8	780 10.0	2.7	775 12.4	3.3	775 10.0			
158 JSP	Fed. 200	1.57 5.6		6.8	1,250 33.1	6.0	1,160 33.4	7.8	1,280 33.2	8.0	1,305 33.8	10.7 1,420 33.3
158 LSWC	Fed. 200	1.58 5.6		5.5	1,320 33.9	5.5	1,215 34.0	6.8	1,295 33.9	7.9	1,365 33.9	10.1 1,490 33.6
170 FMJ	Fed. 200	1.58 5.6		6.2	1,175 33.9	5.4	1,025 33.6	6.8	1,175 33.6	7.0	1,175 33.5	9.7 1,310 33.8
180 JHP	Fed. 200	1.58 5.6		6.3	1,135 34.0	5.3	930 33.2	7.0	1,125 33.8	7.2	1,110 34.0	9.7 1,260 33.3
200 LRN	Fed. 200	1.57 5.6		5.3	1,085 33.9	4.6	990 33.6	6.0	1,105 33.9	6.1	1,105 33.9	8.2 1,225 33.9
.38 Special												
110 JHP	Fed. 100	1.43 5.6		4.5	1,085 14.9	4.0	1,000 15.8	5.6	1,090 15.4	5.6	1,090 15.8	7.8 1,170 15.7
125 JSP	Fed. 100	1.44 5.6		4.4	1,000 15.3	3.9	950 15.6	5.3	1,015 16.0	5.5	1,040 16.0	7.3 1,035 15.6
148 LWC	Fed. 100	1.18 5.6		2.8	815 15.9	2.5	750 15.5	3.3	815 15.3	3.5	820 16.0	5.3 810 13.6
148 LWC (target)	Fed. 100	1.18 5.6		2.7	785 14.6	2.3	730 14.8	3.2	775 14.1			
158 LSWC	Fed. 100	1.42 5.6		3.6	910 15.5	3.1	835 15.8	4.3	920 16.0	4.5	930 15.8	
158 LSWC	Rem. SP 1.5	1.42 5.6										
158 LSWC	Fed. 100	1.42 5.6		3.5	805 15.6	3.2	715 15.7			4.4	805 16.0	6.1 955 15.6
160 JSP	Fed. 100	1.43 5.6		3.0	760 15.1	2.8	725 15.1	4.2	800 15.6	3.8	785 15.5	5.3 850 16.0
200 LRN	Fed. 100	1.54 5.6						3.6	780 15.7			
.38 Special +P												
90 JHP	Fed. 100	1.41 5.6		5.5	1,340 17.0	4.5	1,245 17.0	6.3	1,300 16.8	6.5	1,310 17.1	9.1 1,345 16.9
110 JHP	Fed. 100	1.43 5.6		5.0	1,175 17.4	4.2	1,040 17.5	5.9	1,160 17.5	6.5	1,200 17.1	8.2 1,205 16.8
125 JSP	Fed. 100	1.44 5.6		4.8	1,090 17.5	4.1	965 17.0	5.6	1,070 17.5	5.8	1,050 16.9	7.5 1,065 16.9
158 LSWC	Fed. 100	1.42 5.6		3.8	945 17.2	3.2	855 16.8	4.5	950 17.1	4.7	965 17.3	6.3 995 17.0
160 JSP	Fed. 100	1.43 5.6		3.7	820 17.1	3.3	750 17.4	4.4	885 17.1	4.9	880 17.3	6.3 905 17.4
200 LRN	Fed. 100	1.54 5.6		3.3	795 17.1	2.9	750 17.0	3.7	800 17.1	4.0	825 17.2	7.1 890 17.5

Pistol and Revolver Loads

Cartridge/Bullet	Primer	Min. OAL (inches)	Bbl Length	Ballistic		Red Dot		American Select		Green Dot		Unique		Power Pistol		Hercu		Blue Dot		2400				
				Chg	fps	psi	Wt	Chg	fps	psi	Wt	Chg	fps	psi	Wt	Chg	fps	psi	Wt	Chg	fps	psi	Wt	
<b>.38 Super Auto +P</b>																								
115 JHP	Rem. SP 1.5	1.255	5	5.5	1,240	33.9	4.7	1,155	33.5			5.7	1,225	33.8	7.3	1,345	34.4	6.8	1,260	34.0	10.2	1,360	33.0	
130 FMJ	Rem. SP 1.5	1.26	5	5.1	1,170	33.6	4.5	1,095	33.9			5.2	1,135	33.6	6.8	1,255	34.6	6.3	1,180	33.5	9.1	1,265	32.5	
147 XTP	Rem. SP 1.5	1.275	5	5.0	1,095	34.0	4.5	1,035	34.0			4.7	1,045	33.5	5.8	1,105	34.0	6.4	1,135	33.8	8.6	1,220	33.9	
158 L	Rem. SP 1.5	1.275	5	4.6	1,030	33.6	4.0	985	34.0			4.9	1,025	33.9	5.9	1,085	33.8	6.0	1,080	33.1	8.3	1,190	33.9	
<b>.357 Sig.</b>																								
90 JHP	Fed. 100	1.09	4	7.5	1,564	37.9	7.1	1,495	35.4	8.5	1,506	37.1	7.8	1,545	36.5	9.2	1,615	37.1	11.4	1,715	37.0	12.8	1,690	35.3
115 JHP	Fed. 100	1.14	4	6.5	1,337	37.6	6.4	1,285	37.1	7.1	1,288	37.4	6.9	1,305	37.0	8.0	1,377	38.0	8.7	1,400	36.6	11.3	1,495	37.4
124 TMJ	Fed. 100	1.12	4	7.0	1,325	37.0	6.0	1,215	37.2	7.0	1,219	37.1	6.5	1,255	36.8				8.3	1,345	37.6	10.6	1,405	36.9
125 JHP	Fed. 100	1.14	4	6.1	1,244	37.0						7.5	1,300	36.2	8.6	1,357	36.9		10.5	1,375	36.7			
147 XTP	Fed. 100	1.138	4	5.1	1,078	35.3				5.2	983	35.9	4.8	1,010	37.1	5.8	1,110	37.2	6.4	1,140	37.6	8.2	1,205	35.8
<b>.380 Auto</b>																								
88 JHP	Win. W.S.P.	0.96	3.7	3.2	980	14.3	3.1	965	14.6	3.7	987	19.7	3.4	940	14.6	4.0	920	13.6	4.1	995	14.9	6.0	1,000	14.7
90 JHP	Win. W.S.P.	0.96	3.7	3.0	940	12.9	3.1	940	14.3				3.2	890	12.8	4.0	940	14.0	4.0	960	14.8	6.0	980	14.8
90 XTP	Win. W.S.P.	0.96	3.7																					
95 FMJ	Win. W.S.P.	0.975	3.7	3.2	900	14.7	3.1	885	14.9				3.5	890	14.7	4.2	910	14.6	4.4	910	14.6	6.5	910	14.2
100 FMJ-RN	Win. W.S.P.	0.975	3.7	3.3	985	20.1	2.8	920	19.9				3.1	955	20.0	4.3	1,005	19.5	4.6					
<b>.38/40 Win.</b>																								
150 gr. Sierra JHP	Rem. 2.5	1.585	5.6	6.5	960	12.6	6.2	910	12.8				6.8	950	12.7	8.2	990	13.2	9.2	995	13.1	11.8	1,020	13.1
180 gr. Sierra JHP	Rem. 2.5	1.58	5.6	5.6	820	12.2	5.1	740	12.5				5.6	745	12.7	6.9	815	13.2	7.3	795	13.1	10.3	875	13.2
200 gr. Hornady FMJ/FP	Rem. 2.5	1.585	5.6	5.3	750	12.4	4.8	685	12.4				5.5	730	12.5	6.7	765	13.1	7.3	785	13.3	9.9	840	13.5
<b>.40 S&amp;W Auto</b>																								
135 JHP	Win. W.S.P.	1.105	4	7.6	1,350	33.6	6.7	1,280	33.2				7.5	1,330	33.1	8.5	1,290	36.6	9.3					
150 JHP	Win. W.S.P.	1.105	4	6.7	1,225	34.0	5.9	1,155	34.0	6.0	1,140	33.0	6.2	1,175	33.8	8.0	1,245	34.0	8.2	1,215	33.3			
155 JHP	Win. W.S.P.	1.125	4	4.9	1,051	33.1				5.7	1,061	32.6				6.5	1,064	32.2	7.0	1,115	32.3			
170 XTP	Win. W.S.P.	1.124	4	5.5	1,015	33.5	5.1	985	34.0	5.4	1,020	33.1	5.6	1,045	33.7	6.7	1,075	33.8	7.3	1,105	33.3			
180 JHP	Win. W.S.P.	1.125	4	5.5	1,015	33.9	5.0	980	34.0	4.7	930	32.4	5.3	1,010	33.6	6.4	1,065	33.8	6.9	1,050	33.7			
180 JHP	Win. W.S.P.	1.125	4	4.5	911	13.0				5.0	912	31.2				5.5	973	32.7	6.9	977	32.7			
190 JHP	Win. W.S.P.	1.13	4	5.4	955	34.0	4.9	895	33.6	4.7	895	32.0	5.1	955	33.6	6.1	1,010	34.0	6.9	1,020	33.1			
200 FMJ	Win. W.S.P.	1.13	4	4.6	945	33.6	4.1	890	33.5	4.2	845	32.6	4.3	890	33.6	5.3	955	33.9	6.3	960	33.7			
<b>10mm Auto</b>																								
135 JHP	Fed. 150	1.25	5.5																					
150 JHP	Fed. 150	1.25	5.5																					
155 JHP	Fed. 150	1.25	5.5	6.7	1,190	34.0																		
155 L	Fed. 150	1.25	5.5																					
170 JHP	Fed. 150	1.25	5.5	6.2	1,135	34.0																		
180 JHP	Fed. 150	1.25	5.5	6.4	1,125	35.9																		
180 L	Fed. 150	1.25	5.5																					
190 JHP	Fed. 150	1.25	5.5	6.3	1,050	35.5																		
200 FMJ	Fed. 150	1.26	5.5	5.3	940	33.6																		
<b>.41 Rem. Mag.</b>																								
200 JHP	Rem. 2.5	1.58	5.8	8.0	1,235	35.7	7.5	1,200	33.4				8.3	1,170	35.0	10.0	1,280	35.7	10.1	1,320	35.9	14.0	1,470	36.0
210 JHP	Rem. 2.5	1.575	5.8	8.3	1,245	34.3	8.2	1,225	34.3				8.7	1,165	35.8	10.1	1,265	35.4	10.3	1,320	34.8	13.5	1,425	33.8
220 JHP	Rem. 2.5	1.575	5.8	7.5	1,150	35.8	7.4	1,125	35.9				7.9	1,140	35.8	9.3	1,215	35.3	9.3	1,220	35.8	12.5	1,365	35.8
<b>.44/40 Win.</b>																								
200 JHP	Rem. 2.5	1.59	24	6.6	1,070	12.3	5.9	920	12.4				6.6	990	12.2	8.0	1,090	12.4						
240 L	Rem. 2.5	1.58	24	5.0	850	12.2	4.7	800	12.3				5.5	850	12.2	6.7	950	12.5	7.1	955	12.4	9.9	1,125	12.5
<b>.44 Rem. Mag.</b>																								
180 JHP	Fed. 150	1.585	5.7	11.5	1,520	33.4	10.0	1,410	34.6	11.2	1,435	33.9	11.3	1,470	34.6	13.0	1,550	35.0	13.6	1,560	34.9	19.0	1,725	34.0
200 JHP	Fed. 150	1.575	5.7	11.0	1,420	34.0	9.7	1,320	34.8	10.6	1,320	34.1	10.7	1,370	34.5	13.0	1,475	34.4	13.0	1,455	34.4	17.0	1,565	33.4
225 JHP	Fed. 150	1.575	5.7	9.5	1,270	34.6	8.2	1,185	34.6	9.1	1,165	33.4	9.2	1,220	34.7	10.7	1,290	34.8	11.0	1,285	34.7	15.2	1,445	34.9
240 JHP	Fed. 150	1.585	5.7	8.9	1,215	34.7	7.7	1,090	35.0	8.6	1,100	34.2	8.7	1,190	35.0	10.3	1,250	34.9	10.5	1,245	34.7	14.4	1,380	34.8

# Pistol and Revolver Loads

.44 Rem. Mag. (continued)

Cartridge/Bullet	Primer	Min. OAL (inches)	Blk Length	Bullseye Chg fps psi Wt x100	Red Dot Chg fps psi Wt x100	American Select Chg fps psi Wt x100	Green Dot Chg fps psi Wt x100	Unique Chg fps psi Wt x100	Power Pistol Chg fps psi Wt x100	Hercu Chg fps psi Wt x100	Blue Dot Chg fps psi Wt x100	2400 Chg fps psi Wt x100
Fed. 150		1.6	5.7	9.8	8.8	9.2	9.5	11.8	12.5	12.5	16.6	20.6
240 L (GC)		1.6	5.7	8.3	7.1	8.3	7.8	9.3	9.5	12.5	12.7	21.5
Swift 240 HP	Win WLP	1.6	5.7	8.3	7.1	8.3	7.8	9.3	9.5	12.5	12.7	21.5
Fed. 150		1.6	5.7	7.5	6.7	6.8	6.9	8.3	9.1	10.1	11.7	18.6
265 JFP		1.6	5.7	7.5	6.7	6.8	6.9	8.3	9.1	10.1	11.7	18.6
Swift 280 HP	Win WLP	1.6	5.7	7.5	6.7	6.8	6.9	8.3	9.1	10.1	11.7	18.6
300 HP/XTP		1.6	5.7	6.8	5.8	6.8	6.2	7.2	8.0	10.0	10.7	17.3
Swift 300 HP	Win WLP	1.6	5.7	6.8	5.8	6.8	6.2	7.2	8.0	10.0	10.7	17.3
310 LSWC		1.6	5.7	6.5	6.4	5.4	6.7	9.0	9.8	10.0	13.5	20.6
Win WLP		1.6	5.6	6.5	6.4	5.4	6.7	9.0	9.8	10.0	13.5	20.6
180 JHC		1.59	5.6	4.5	4.3	4.7	5.0	6.0	7.7	8.0	9.2	11.3
240 LSWC	Win WLP	1.59	5.6	4.5	4.3	4.7	5.0	6.0	7.7	8.0	9.2	11.3
246 LRN		1.59	5.6	6.9	5.8	6.0	6.6	7.8	8.5	11.8	16.6	21.5
.45 ACP		1.27	5	5.4	4.8	5.9	5.3	6.0	6.7	9.0	9.0	9.0
155 Cast Lead		1.19	5	6.7	5.9	5.1	6.8	8.2	8.6	10.2	13.6	13.6
180 LSWC		1.27	5	6.0	5.2	5.4	5.9	7.1	7.4	9.5	10.6	19.5
185 JHP		1.19	5	4.0	4.0	4.0	4.3	5.1	7.2	8.9	8.5	16.2
185 LWC		1.17	5	5.0	5.0	4.9	5.4	6.4	7.0	8.7	9.8	19.3
200 JHP		1.17	5	4.0	4.0	4.5	4.3	5.0	6.5	8.3	8.3	19.3
200 LSW (target)		1.25	5	5.0	4.5	4.7	5.0	5.9	9.1	10.7	13.6	13.6
230 LMC		1.19	5	5.0	4.5	4.7	5.0	5.9	9.1	10.7	13.6	13.6
230 JHP		1.23	5	4.0	4.0	4.5	4.3	5.0	6.5	8.3	8.3	19.3
230 L (target)		1.19	5	5.0	4.5	4.7	5.0	5.9	9.1	10.7	13.6	13.6
240 JHC		1.21	5	4.5	4.5	4.7	5.0	5.9	9.1	10.7	13.6	13.6
240 JHP		1.21	5	4.5	4.5	4.7	5.0	5.9	9.1	10.7	13.6	13.6
260 JHP		1.21	5	4.5	4.5	4.7	5.0	5.9	9.1	10.7	13.6	13.6
.45 ACP+P		1.27	5	4.5	4.5	4.7	5.0	5.9	9.1	10.7	13.6	13.6
185 JHP		1.19	5	4.5	4.5	4.7	5.0	5.9	9.1	10.7	13.6	13.6
200 JHP		1.19	5	4.5	4.5	4.7	5.0	5.9	9.1	10.7	13.6	13.6
230 FMC		1.19	5	4.5	4.5	4.7	5.0	5.9	9.1	10.7	13.6	13.6
240 JHC		1.19	5	4.5	4.5	4.7	5.0	5.9	9.1	10.7	13.6	13.6
.45 Colt		1.55	7.3	6.0	7.0	5.8	8.0	9.0	9.5	11.4	13.0	11.8
200 JHP		1.55	7.3	6.0	7.0	5.8	8.0	9.0	9.5	11.4	13.0	11.8
230 LRN		1.55	7.3	5.4	6.0	5.5	6.8	8.0	9.0	10.2	11.5	8.0
250L		1.58	7.3	5.0	4.8	5.5	5.7	6.8	7.2	8.0	10.0	12.3
300 HP/XTP		1.58	7.3	5.0	4.8	5.5	5.7	6.8	7.2	8.0	10.0	12.3
.454 Casull		1.75	7.5	5.0	4.8	5.5	5.7	6.8	7.2	8.0	10.0	12.3
Hornady 300 gr XTP	Fed. 205M	1.75	7.5	5.0	4.8	5.5	5.7	6.8	7.2	8.0	10.0	12.3
Swift 300 HP	Fed. 205M	1.8	7.5	5.0	4.8	5.5	5.7	6.8	7.2	8.0	10.0	12.3

28.0 1,700 58.1

28.9 1,720 60.0

# COWBOY



# ACTION

## Cowboy Action Load Data

Caliber	Barrel Length	Bullet	Min. OAL (inches)	Powder	Min. Weight (grs)	Velocity (fps)	Max. Weight (grs)	Velocity (fps)
.38 Spec.	6.5	125 gr Laser Cast TC	1.45	Bullseye	2.8	690	4.8	1,024
				American Select	3.2	675	4.7	989
		125 gr Meister RNFP	1.45	Red Dot	3.0	700	4.6	1,025
				Unique	4.5	700	6.0	1,075
		140 gr Hornady lead FP	1.45	Bullseye	3.0	727	4.5	945
				Red Dot	3.0	710	4.5	960
				American Select	3.5	765	4.5	988
				Unique	4.0	754	5.5	985
.357 Mag.	6.5	125 gr Laser Cast TC	1.58	American Select	3.3	764	3.9	856
		140 gr Hornady lead FP	1.57	American Select	3.3	750	3.6	825
		158 RN	1.585	Unique	3.5	725	4.0	820
				American Select	3.5	746	4.0	840
				Unique	3.8	741	4.5	859
.44 Spec.	5.5	205 gr National RNFP lead	1.445	Bullseye	4.5	793	5.0	843
				Red Dot	4.5	793	5.5	910
				American Select	5.5	877	6.0	935
				Unique	6.0	835	7.0	953
				Red Dot	4.2	616	5.1	737
		240 SWC	1.48	American Select	4.2	650	4.9	739
				Green Dot	4.6	632	5.5	747
				Unique	5.1	613	6.0	697
				Red Dot	5.8	792	6.3	879
				American Select	6.2	810	6.5	852
.44 Mag.	5.5	205 gr National RNFP lead	1.58	Green Dot	6.3	797	6.7	867
				Unique	8.0	930	8.5	990
				Red Dot	4.9	767	5.5	839
				American Select	5.0	762	5.7	842
				Green Dot	5.2	755	6.0	863
		240gr Laser Cast RNFP	1.595	Unique	6.0	743	6.8	839
				Red Dot	4.8	723	5.6	814
				American Select	5.1	742	6.0	832
				Unique	6.0	750	7.0	860
				Red Dot	6.0	785	7.0	897
.45 Colt	5.5	200 RNFP	1.585	American Select	6.5	823	7.0	883
				Unique	7.5	786	9.0	927
				Red Dot	5.5	721	6.5	824
		225 RNFP lead	1.6	American Select	6.0	743	6.5	797
				Unique	7.8	801	8.5	862
				Red Dot	5.0	680	6.0	757
		250 gr RNFP lead	1.58	American Select	5.0	650	6.5	767
				Unique	6.0	650	7.5	750
				Green Dot	5.5	1,076		
				Unique	7.0	1,236		
30-30	24	165 FP	2.512	Reloder 7	15.8	1,534		
				Bullseye			3.0	1,009
				Red Dot			2.6	923
45/70	24	300 FP	2.397	Unique	10.0	1,074	15.0	1,424
		405 Laser Cast	2.550	Reloder 7	28.8	1,388		
				Unique	11	1,000		

**CAN'T FIND THE ANSWER?  
VISIT THE ALLIANT WEB SITE.**

[www.alliantpowder.com](http://www.alliantpowder.com)

# SILHOUETTE DATA



## Silhouette Loads

Cartridge/Bullet	Primer	Min OAL (inches)	Blue Dot			2400			Reloder 7		
			Charge Weight (grains)	Velocity (fps)	Chamber Pressure (copper units)	Charge Weight (grains)	Velocity (fps)	Chamber Pressure (copper units)	Charge Weight (grains)	Velocity (fps)	Chamber Pressure (copper units)
2 Rem.											
(mm. Case)											
10 gr. Sierra Spitzer	Fed. 205M	2.09				12.9	2,425	43.8	19.3	2,700	43.8
100 gr. Sierra BRHP	Fed. 205M	2.104				12.4	2,345	43.8	18.2	2,575	43.5
10 gr. Sierra Spitzer	Fed. 205M	2.125				12.0	2,250	43.1	17.6	2,495	43.4
10 gr. Hornady Spire Pt.	Fed. 205M	2.125				12.0	2,180	43.8	17.0	2,400	43.8
10 gr. Hornady BTHP	Fed. 205M	2.125				11.3	1,990	43.8	16.5	2,230	43.2
23 Rem.											
(mm. Case)											
10 gr. Sierra Spitzer	Fed. 205M	2.25				15.9	2,430	48.5	22.1	2,670	48.9
10 gr. Hornady Spire Pt.	Fed. 205M	2.25				15.4	2,320	48.5	21.4	2,550	49.5
30 BR Rem.											
(mm. Case)											
10 gr. Sierra Spitzer	Rem. 7.5 BR	2.3				20.2	2,160	47.1	27.8	2,425	47.4
15 gr. Speer Spitzer	Rem. 7.5 BR	2.3				17.7	1,800	47.2	24.8	2,130	47.8
3008											
(mm. Case)											
10 gr. Sierra Spitzer	Fed. 210 BR	2.75				27.5	2,310	48.1	37.2	2,560	48.9
15 gr. Speer Spitzer	Fed. 210 BR	2.75				23.5	1,970	48.3	33.0	2,250	48.3
30-30 Win.											
(mm. Case)											
12 gr. Cast Lead	Fed. LR #210	2.5	13.0	1,525	29.0	16.0	1,650	33.3	25.0	1,950	34.9
10 gr. Rem. SPCL	Fed. LR #210	2.5				16.0	1,500	34.7	23.5	1,800	34.9
35 Rem.											
(mm. Case)											
18 gr. Hornady L	Fed. LR #210	2.4	15.5	1,574	25.2	21.0	1,715	25.3	28.5	1,875	26.6
10 gr. Sierra FMJ	Fed. LR #210	2.4	13.0	1,300	22.4	17.0	1,450	23.4			
10 gr. Rem. SPCL	Fed. LR #210	2.51				22.0	1,650	31.7	30.0	1,825	31.7
57 Mag.											
(mm. Case)											
18 gr. Rem. SP	Fed. 200	1.58	12.0	1,600	42.9	14.6	1,640	42.3			
70 gr. Sierra FMJ	Fed. 200	1.58	10.7	1,445	41.7	13.2	1,450	43.0			
30 gr. Sierra FPJ	Fed. 200	1.58	9.2	1,250	42.4	12.1	1,350	41.7			
30 gr. Speer FMJ	Fed. 200	1.58	9.6	1,265	42.3	11.8	1,320	42.9			
57 Maximum											
(mm. Case)											
25 gr. Speer JHP	Rem. 7.5 BR	1.9	15.0	1,860	38.2	20.5	2,045	38.2			
58 gr. Hornady HP	Rem. 7.5 BR	1.975				18.0	1,790	40.4	26.0	1,845	33.6
60 gr. Speer SP	Rem. 7.5 BR	1.975	15.3	1,760	40.7	17.4	1,775	41.2	26.0	1,830	32.7
70 gr. Sierra FMJ	Rem. 7.5 BR	1.975	14.5	1,675	41.3	16.5	1,670	40.5	25.5	1,840	40.1
80 gr. Sierra FPJ	Rem. 7.5 BR	1.975	14.9	1,610	39.4	16.8	1,590	39.0	25.0	1,760	39.7
100 gr. Speer FMJ	Rem. 7.5 BR	1.975	11.6	1,275	41.3	14.1	1,340	41.3	22.3	1,650	41.4
14 Rem. Mag.											
(mm. Case)											
80 gr. Sierra HC	Fed. 150	1.59	18.8	1,875	37.9	23.0	1,910	37.8			
40 gr. Speer FMJ	Fed. 150	1.59	15.5	1,550	37.6	18.8	1,560	36.8			
50 gr. Sierra FPJ	Fed. 150	1.59	15.0	1,525	36.8	19.0	1,600	37.8			
65 gr. Hornady FP	Fed. 150	1.59	14.1	1,420	36.3	17.4	1,460	37.4			

# CENTERFIRE

## Centerfire Loads



# RIFLE RELOADING DATA

Cartridge/Bullet	Primer	Min. OAL (inches)	BB Length	2400 Chg Wt	2400 fps psi x100	Relo-der 7 Chg Wt	Relo-der 7 fps psi x100	Relo-der 15 Chg Wt	Relo-der 15 fps psi x100	Relo-der 19 Chg Wt	Relo-der 19 fps psi x100	Relo-der 22 Chg Wt	Relo-der 22 fps psi x100	Relo-der 25 Chg Wt	Relo-der 25 fps psi x100
<b>.17 Rem.</b>															
Hornady 25HP	Rem. 7.5	2.14	Rem.												
<b>.22 Hornet</b>															
Speer 40SP	Win. 6.5-116	1.71	Win.	7.5	2,250 41.0	11.0	2,265 19.8								
Speer 45 Spitz	Win. 6.5-116	1.71	Win.	7.1	2,065 41.3	10.6	2,170 20.3								
Hornady 50SPSX	Win. 6.5-116	1.71	Win.	7.0	1,945 41.7	10.5	2,115 21.5								
<b>.220 Swift</b>															
Speer 45 Spitz	CCI 200	2.645	Horn.					39.0	4,010 50.3						
Hornady 50SPSX	CCI 200	2.66	Horn.					38.0	3,850 49.8	44.0	3,650 50.4				
Hornady 55MIBT	CCI 200	2.63	Horn.					38.0	3,775 50.5	43.9	3,610 50.5				
Hornady 60 Sp. Pl.	CCI 200	2.68	Horn.					35.8	3,540 50.4	43.0	3,575 50.4	43.0	3,565 49.9		
<b>.221 Rem. Fireball</b>															
Speer 40SP	Rem. 7.5	1.8	Rem.	10.5	1.5 2,700 46.5										
Sierra 50 Spitz	Rem. 7.5	1.825	Rem.	10.5	1.8 2,410 43.5										
Sierra 53BRHP	Rem. 7.5	1.825	Rem.	10.5	1.5 2,320 43.6										
Nosler 60 Spitz	Rem. 7.5	1.825	Rem.	10.5	1.3 2,200 46.3	18.1	2,250 34.0								
<b>.222 Rem.</b>															
Speer 45 Spitz	Rem. 7.5 BR	2.09	Rem.	24		19.8	3,225 47.5								
Sierra 50SP	Rem. 7.5 BR	2.13	Rem.	24		20.0	3,115 4.4								
Sierra 55MIBT	Rem. 7.5 BR	2.13	Rem.	24											
Hornady 60SPPT	Rem. 7.5 BR	2.13	Rem.	24											
<b>.222 Rem. Mag.</b>															
Speer 45 Spitz	Rem. 7.5	2.28	Rem.	24		23.0	3,400 46.5								
Sierra 50 Spitz	Rem. 7.5	2.28	Rem.	24		22.5	3,350 45.4								
Sierra 53BRHP	Rem. 7.5	2.28	Rem.	24		22.0	3,120 44.5								
Sierra 55 Spitz	Rem. 7.5	2.28	Rem.	24		22.0	3,100 46.0								
<b>.223 Rem.</b>															
Speer 45 Spitz	Fed. 205M	2.21	Fed.	24	14.9	3,030 49.6	21.8	3,375 53.2	28.5	3,635 53.5					
Hornady 50 V-Max Moly	Fed. 205M	2.25	Rem.	24				28.0	3,386 49.0						
Hornady 50SP	Fed. 205M	2.25	Fed.	24	14.5	2,795 48.5	21.5	3,195 53.0	28.3	3,440 53.7					
Sierra 521HPBT	Fed. 205M	2.25	Fed.	24			2.9	3,165 53.3	27.3	3,259 51.4					
Sierra 55 SP	Fed. 205M	2.26	Win.	24				23.5	2,956 51.7						
Sierra 69 HPBT	Fed. 205M	2.26	Win.	24				24.1	2,793 51.2						
Sierra 77 HPBT	Fed. 205M	2.26	Win.	24				24.9	2,895 53.4						
Hornady 75BTHP	Fed. 205M	2.26	Rem.	24											
<b>.22/250 Rem.</b>															
Hornady 50 V-Max Moly	Win. W.L.R.	2.35	Rem.	24				38.1	3,916 60.3	13.0	3,540 51.7				
Hornady 55MIBT	Win. W.L.R.	2.35	Rem.	24				35.6	3,625 59.4						
Hornady 50SPSX	Win. W.L.R.	2.35	Win.	24				34.1	3,485 59.4	41.0	3,510 57.8				
Hornady 60SP	Win. W.L.R.	2.35	Win.	24											
<b>.243 Win.</b>															
Sierra 60HP	Win. W.L.R.	2.55	Win.	24		30.2	3,320 54.8								

# Centerfire Loads

Cartridge/Bullet	Primer	Min OAL inches	Case	Bbl Length	2400			Reloeder 7			Reloeder 15			Reloeder 19			Reloeder 22			Reloeder 25		
					Chg Wt	fps	psi x100	Chg Wt	fps	psi x100	Chg Wt	fps	psi x100	Chg Wt	fps	psi x100	Chg Wt	fps	psi x100	Chg Wt	fps	psi x100
<b>.243 Win. (continued)</b>																						
Speer 80 Spitz	Win. W.L.R.	2.685	Win.	24							36.5	3,145	57.5	44.5	3,270	57.5						
Sierra 100 Spitz BT	Win. W.L.R.	2.7	Win.	24										41.0	2,925	57.1	41.7	2,950	57.5			
<b>6mm Rem.</b>																						
Sierra 60HP	Rem. 9.5	2.76	Rem.	24							43.6	3,820	62.7									
Speer 75HP	Rem. 9.5	2.79	Rem.	24							40.6	3,410	62.3									
Speer 80 Spitz	Rem. 9.5	2.79	Rem.	24							40.5	3,340	63.0	49.5	3,435	61.7	51.5	3,450	60.9			
Sierra 100 Spitz B1	Rem. 9.5	2.8	Rem.	24										46.0	3,145	62.5	48.0	3,205	62.5			
<b>.250 Savage</b>																						
Sierra 75HP	Rem. 9.5	2.4	Rem.	24							38.3	3,350	43.7									
Speer 87 Spitz	Rem. 9.5	2.45	Rem.	24							36.0	3,135	43.8	41.0	2,940	42.8						
Speer 100 Spitz	Rem. 9.5	2.5	Rem.	24										40.0	2,855	43.4						
Sierra 120HPBT	Rem. 9.5	2.51	Rem.	24													40.0	2,690	43.6			
<b>.25-06 Rem.</b>																						
Speer 87 Spitz	Fed. 210	3.09	Fed.	24							47.2	3,425	61.0	57.3	3,525	59.8						
Speer 100 Spitz	Fed. 210	3.2	Fed.	24							44.9	3,190	61.0	54.3	3,320	61.0	55.9	3,355	61.1			
Sierra 120HPBT	Fed. 210	3.225	Fed.	24										50.5	3,025	60.4	52.5	3,080	60.4			
<b>.25/20 Win. (chamber pressure in copper units)</b>																						
Rem. 86SP	CCI 400	1.59	Rem.	24	6.0	1,340	18.3	11.5	1,460	15.0												
<b>.257 Roberts (chamber pressure in copper units)</b>																						
Sierra 75HP	Win. W.L.R.	2.775	Win.	24							41.8	3,340	42.7									
Speer 87 Spitz	Win. W.L.R.	2.775	Win.	24							41.0	3,185	43.2	44.7	2,930	43.1	44.0	2,785	43.0			
Speer 100 Spitz	Win. W.L.R.	2.775	Win.	24																		
Sierra 120HPBT	Win. W.L.R.	2.775	Win.	24																		
<b>.257 Roberts +P (chamber pressure in copper units)</b>																						
Sierra 75HP	Win. W.L.R.	2.775	Win.	24							43.4	3,510	48.0									
Speer 87 Spitz	Win. W.L.R.	2.775	Win.	24							43.5	3,310	48.0	47.2	3,110	47.9	46.5	2,945	48.0			
Speer 100 Spitz	Win. W.L.R.	2.775	Win.	24																		
Sierra 120HPBT	Win. W.L.R.	2.775	Win.	24																		
<b>.257 Wby. Mag.</b>																						
Sierra 75HP	Fed. 215	3.075	Wby.	26							73.3	3,895	52.9	77.0	3,900	53.0						
Speer 87 Spitz	Fed. 215	3.15	Wby.	26							68.4	3,650	53.0	73.0	3,675	52.7						
Speer 100 Spitz	Fed. 215	3.17	Wby.	26							64.5	3,420	52.7	69.0	3,460	52.4						
Barnes 115 Spitz	Fed. 215	3.17	Wby.	26							61.3	3,175	53.0	64.5	3,200	52.7						
Nosler 120 SP	Fed. 215	3.17	Wby.	26							59.7	3,100	53.0	62.7	3,140	52.9						
<b>.260 Rem.</b>																						
Sierra 85 HP	Rem. 9.5	2.71	Rem.	22							44.5	3,285	59.6	49.2	3,200	60.2						
Sierra 100 HP	Rem. 9.5	2.71	Rem.	22							43.0	3,168	58.8	49.0	3,180	58.7						
Hornady 129 SP	Rem. 9.5	2.75	Rem.	22							39.0	2,740	61.1	46.0	2,890	61.5						
Sierra 140 SBT	Rem. 9.5	2.75	Rem.	22							38.0	2,610	60.8	44.8	2,690	60.7						
<b>.264 Win. Mag. (chamber pressure in copper units)</b>																						
Hornady 129 Sp. Pl.	Win. W.L.R.	3.27	Win.	24							57.0	3,070	51.8	57.0	3,070	51.8	57.0	2,780	51.8			
Speer 140 Spitz	Win. W.L.R.	3.31	Win.	24							56.0	2,945	51.8									
Hornady 160RN	Win. W.L.R.	3.315	Win.	24																		
<b>6.5X55 Swedish Mauser (chamber pressure in copper units)</b>																						
Hornady 129SP	CCI 200	2.935	Norma	24				25.8	2,130	43.6	38.8	2,620	44.4	48.0	2,815	44.5						
Speer 140 Spitz	CCI 200	3	Norma	24							36.6	2,480	44.2	46.0	2,650	44.0	48.1	2,700	44.4			
Hornady 160RN	CCI 400	2.975	Norma	24				25.0	1,940	44.0	35.6	2,325	44.0	45.0	2,500	44.3	47.0	2,535	44.0			

Centerfire Loads

Cartridge/Bullet	Primer	Min OAL (inches)	Case	BBL Length	2400			Reloeder 7			Reloeder 15			Reloeder 19			Reloeder 22			Reloeder 25		
					Chg Wt	fps	psi x100	Chg Wt	fps	psi x100	Chg Wt	fps	psi x100	Chg Wt	fps	psi x100	Chg Wt	fps	psi x100	Chg Wt	fps	psi x100
<b>.270 Wby. Mag.</b>																						
Speer 100 Spitz	Fed. 215	3.16	Wby.	26										76.8	3,755	53.4	79.0	3,775	53.0			
Speer 130 Spitz	Fed. 215	3.26	Wby.	26										70.5	3,340	53.5	73.8	3,400	53.5			
Sierra 140 SBT	Fed. 215	3.275	Wby.	26										68.1	3,240	53.5	71.0	3,280	53.5			
Nosler 150 Spitz	Fed. 215	3.285	Wby.	26										64.8	3,090	53.2	69.7	3,180	53.5			
Sierra 150 SBT	Fed. 215	3.285	Wby.	26										64.4	3,075	53.5	68.8	3,145	53.5			
<b>.270 Win.</b>																						
Speer 100 Spitz	Win. W.L.R.	3.15	Win.	24							53.8	3,465	62.0	64.0	3,510	61.8						
Speer 130 Spitz	Win. W.L.R.	3.25	Win.	24							47.3	2,840	61.6	57.5	3,110	61.6	60.0	3,160	61.5			
Sierra 140 SBT	Win. W.L.R.	3.28	Win.	24							47.0	2,770	61.6	57.0	2,910	61.5	60.0	2,930	59.4			
Nosler 150 Spitz	Win. W.L.R.	3.325	Win.	24										56.5	2,810	61.8	59.5	2,845	60.3			
Sierra 150 Spitz BT	Win. W.L.R.	3.32	Win.	24										55.5	2,945	61.4	58.5	3,010	61.8			
<b>.280 Rem.</b>																						
Hornady 120SP	Rem. 9.5	3.31	Rem.	24							48.0	3,065	57.2	58.0	3,115	57.6						
Hornady 139 Sp Pt	Rem. 9.5	3.32	Rem.	24							46.5	2,860	57.7	57.0	2,970	58.0	59.5	3,000	57.5			
Speer 145 Spitz	Rem. 9.5	3.32	Rem.	24							43.0	2,630	57.1	53.0	2,815	57.8	56.0	2,865	58.0			
Sierra 160 Spitz BT	Rem. 9.5	3.325	Rem.	24										53.4	2,750	58.1	55.7	2,795	58.0			
<b>.284 Win.</b>																						
Hornady 120 SP	Win. W.L.R.	2.8	Win.	24							51.5	3,235	54.3	60.5	3,265	53.6						
Hornady 130SP	Win. W.L.R.	2.795	Win.	24							48.0	2,955	54.7	57.0	3,075	53.5	58.5	3,030	49.0			
Speer 145 Spitz	Win. W.L.R.	2.795	Win.	24							46.7	2,855	55.1	55.0	2,940	52.4	55.0	2,900	49.2			
Nosler 150 Part.	Win. W.L.R.	2.79	Win.	24										55.0	2,940	53.5	55.0	2,840	46.3			
Sierra 160 Spitz BT	Win. W.L.R.	2.8	Win.	24										54.0	2,885	54.6	52.0	2,680	42.7			
<b>7-30 Waters</b>																						
Hornady 120 Sp. Pt.	Fed. 210	2.64	Fed.	24							36.3	2,725	39.0									
Hornady 139 R.P.	Fed. 210	2.65	Fed.	24							34.7	2,540	38.8									
<b>7mm Rem. Mag.</b>																						
Hornady 120 Sp. Pt.	Rem. 9.5	3.275	Fed.	24							55.0	3,200	58.3	69.0	3,465	58.6	73.0	3,490	58.6			
Hornady 139 Sp. Pt.	Rem. 9.5	3.275	Fed.	24							55.6	3,070	59.0	67.5	3,260	58.1	70.0	3,295	58.0			
Speer 145 Spitz	Rem. 9.5	3.28	Fed.	24							47.5	2,740	58.7	61.7	3,090	58.4	64.5	3,150	58.6			
Nosler 160 Partition	Fed. 215	3.285	Rem.	24										62.0	3,020	58.5	65.0	3,075	58.6			
Sierra 160 Spitz BT	Rem. 9.5	3.285	Fed.	24																		
Swift 160gr A Frame	Fed. 215	3.29	Rem.	24																		
Nosler 175 Partition	Fed. 215	3.285	Rem.	24																		
Sierra 175 Spitz BT	Fed. 215	3.285	Rem.	24																		
Swift 175 A Frame	Fed. 215	3.255	Rem.	24																		
<b>7mm STW</b>																						
Sierra 150 SBT	Fed. 215	3.59	Rem.	26																		
Nosler 160 Partition	Fed. 215	3.6	Rem.	26																		
Swift 160gr A Frame	Fed. 215	3.55	Rem.	26																		
Nosler 175 Partition	Fed. 215	3.6	Remington	26																		
Swift 175 A Frame	Fed. 215	3.555	Remington	26																		
<b>7mm Wby. Mag.</b>																						
Hornady 120 Sp. Pt.	Fed. 215	3.2	Wby.	26							61.3	3,370	52.5	74.0	3,505	52.1						
Hornady 139 Sp Pt.	Fed. 215	3.28	Wby.	26										70.9	3,315	52.5	74.8	3,355	52.3			
Speer 145 Spitz	Fed. 215	3.24	Wby.	26										68.0	3,165	52.2	72.4	3,245	52.5			
Nosler 150 Spitz	Fed. 215	3.25	Wby.	26										67.3	3,145	52.5	72.0	3,220	52.4			
Sierra 160 Spitz	Fed. 215	3.24	Wby.	26										64.8	3,045	52.3	70.7	3,110	52.5			
Sierra 175 Spitz	Fed. 215	3.245	Wby.	26										60.5	2,850	52.2	67.4	2,965	52.5			

7mm Wby. Mag. - Another primer is .270 Rem.

# Centerfire Loads

Cartridge/Bullet		Primer	Min. OAL (inches)	Case	Bbl Length	2400		Reloder 7		Reloder 15		Reloder 19		Reloder 22		Reloder 25	
						Chg Wt	fps	psi x100	Chg Wt	fps	psi x100	Chg Wt	fps	psi x100	Chg Wt	fps	psi x100
<b>7mm-08 Rem.</b>																	
Hornady 120 Sp Pt	Rem. 9.5	2.75	Rem.	24				35.5	2,775	57.2		45.5	3,070	58.7			
Hornady 139 Sp Pt	Rem. 9.5	2.8	Rem.	24				34.0	2,555	57.3		43.0	2,830	59.0	52.0	2,850	57.9
Speer 145 Spitz	Rem. 9.5	2.8	Rem.	24				31.8	2,405	57.5		41.0	2,700	59.0	49.3	2,785	58.9
Sierra 150 HPBT	Rem. 9.5	2.8	Rem.	24				32.3	2,410	57.3		40.9	2,685	58.6	49.0	2,760	58.7
Sierra 160 Spitz BT	Rem. 9.5	2.8	Rem.	24								40.5	2,620	59.0	48.5	2,675	56.4
<b>7X57 Mauser</b>																	
Hornady 120 Sp Pt	Fed. 210	2.965	Fed.	24								45.0	2,995	48.9	54.0	3,030	48.0
Hornady 139 Sp Pt	Fed. 210	3.015	Fed.	24								41.5	2,700	48.4	51.8	2,835	49.0
Speer 145 Spitz	Fed. 210	3.04	Fed.	24								38.5	2,550	48.5	47.3	2,680	48.8
Sierra 160 Spitz BT	Fed. 210	3.04	Fed.	24											49.0	2,665	45.5
<b>.30 Carbine</b>																	
Hornady 100SJ	CCI 400	1.625	Fed.	20		12.3	1,815	34.5									
Cast (GC) 112L	CCI 400	1.625	Fed.	20		10.3	1,590	35.7									
<b>.300 H&amp;H Mag.</b>																	
Hornady 150 Sp Pt	Fed. 210	3.57	Fed.	24								63.8	3,270	52.5	75.0	3,275	52.5
Speer 165 Spitz	Fed. 210	3.555	Fed.	24								60.9	3,065	52.5	72.7	3,150	52.5
Nosler 180 Part.	Fed. 210	3.535	Fed.	24								58.0	2,910	52.3	70.3	3,040	52.5
Speer 180 Spitz	Fed. 210	3.575	Fed.	24								56.7	2,850	52.4	69.8	3,055	52.5
Sierra 200 Spitz BT	Fed. 210	3.59	Fed.	24								55.0	2,725	52.1	67.0	2,910	52.1
<b>.300 Rem Ultra Mag</b>																	
Sierra 150 Spitz	Fed. 215	3.57	Rem.	26											94.0	3,440	63.7
Nosler 165 Part.	Fed. 215	3.5	Rem.	26											93.5	3,320	61.5
Swift 165 A Frame	Fed. 215	3.59	Rem.	26													
Barnes 180 gr X	Fed. 215	3.6	Rem.	26											90.0	3,165	60.8
Nosler 180 Part	Fed. 215	3.6	Rem.	26													
Swift 180 A Frame	Fed. 215	3.53	Rem.	26													
Barnes 200 X	Fed. 215	3.6	Rem.	26													
Swift 200 A Frame	Fed. 215	3.55	Rem.	26													
<b>.300 Wby. Mag.</b>																	
Hornady 150 Sp Pt	Fed. 215	3.54	Wby	26								69.5	3,255	52.8	82.5	3,375	52.5
Barnes 165X	Fed. 215	3.51	Rem.	26											88.0	3,460	53.3
Nosler 165 Part	Fed. 215	3.51	Rem.	26													
Speer 165 Spitz	Fed. 215	3.51	Wby.	26								65.0	3,060	52.8	80.5	3,250	53.2
Nosler 180 Part	Fed. 215	3.53	Wby	26											76.5	3,070	53.4
Sierra 180 SBPT	Fed. 215	3.56	Rem.	26													
Speer 180 Spitz	Fed. 215	3.55	Wby	26											78.0	3,120	53.0
Nosler 200 Partition	Fed. 215	3.56	Rem.	26													
Sierra 200 Spitz	Fed. 215	3.55	Wby.	26								74.0	2,955	53.3	78.0	2,970	53.0
Hornady 220 RN	Fed. 215	3.555	Rem.	26													
<b>.300 Win. Mag.</b>																	
Hornady 150 Sp Pt	Win W.L.R.	3.34	Win.	24								65.3	3,180	61.0	76.7	3,225	61.0
Nosler 165 Part.	Fed. 215	3.34	Rem.	24								62.6	2,980	60.1	74.6	3,070	60.4
Speer 165 Spitz	Win W.L.R.	3.34	Win.	24													
Sierra 180 SBPT	Fed. 215	3.34	Rem.	24													
Speer 180 Spitz	Win W.L.R.	3.34	Win.	24													
Win. 180 ES	Win. W.L.R.	3.34	Win.	24													
Barnes 200 X	Fed. 215	3.35	Rem.	24													
Sierra 200 Spitz BT	Win. W.L.R.	3.34	Win.	24													
Swift 200 SP	Fed. 215	3.308	Rem.	24											68.0	2,810	60.3
															73.4	2,875	60.3

## Centerfire Loads

[illegible]

[illegible]

Centerfire Loads										2400		Reloeder 7		Reloeder 15		Reloeder 19		Reloeder 22		Reloeder 25	
Cartridge/Bullet	Primer	Min. OAL (inches)	Case	Bbl. Length	Chg. Wt.	fps x100	psi	Chg. Wt.	fps x100	psi	Chg. Wt.	fps x100	psi	Chg. Wt.	fps x100	psi	Chg. Wt.	fps x100	psi	Chg. Wt.	fps x100
<b>.38mm Rem. Mag. (continued)</b>																					
Swift 200 A Frame SP	Fed. 215	3.6	Rem.	24																	
Hornady 220 Sp Pt	Rem. 9.5M	3.6	Rem.	24																	
Hornady 220 Sp Pt	Fed. 215	3.6	Rem.	24																	
Swift 220 A Frame SP	Fed. 215	3.6	Rem.	24																	
<b>.338 Win. Mag.</b>																					
Nosler 200 Sp Pt	Win. W.L.R.	3.34	Win.	24																	
Nosler 210 Spitz	Win. W.L.R.	3.33	Win.	24																	
Barnes 225X	Win. W.L.R.	3.335	Win.	24																	
Hornady 225 Sp. Pt.	Win. W.L.R.	3.325	Win.	24																	
Win 230 F's	Win. W.L.R.	3.335	Win.	24																	
Hornady 250RN	Win. W.L.R.	3.33	Win.	24																	
<b>.340 Wby. Mag.</b>																					
Nosler 200 Sp Pt.	Fed. 215	3.66	Why.	26																	
Nosler 210 Spitz	Fed. 215	3.595	Why.	26																	
Hornady 225 Sp Pt	Fed. 215	3.645	Why.	26																	
Hornady 250RN	Fed. 215	3.665	Why.	26																	
<b>.35 Rem.</b>																					
Rem. 150SPCL	Win. W.L.R.	2.485	Win.	24																	
Cast (GC) 158L	Win. W.L.R.	2.485	Win.	24																	
Rem. 200SPCL	Win. W.L.R.	2.485	Win.	24																	
<b>.35 Whelen</b>																					
Hornady 200SP	Rem. 9.5M	3.125	Rem.	24																	
Hornady 250RN	Rem. 9.5M	3.225	Rem.	24																	
<b>.350 Rem. Mag.</b>																					
Rem. 150SPCL	Rem. 9.5M	2.8	Rem.	20																	
Rem. 200SPCL	Rem. 9.5M	2.8	Rem.	20																	
Rem. 250PSP	Rem. 9.5M	2.8	Rem.	20																	
<b>.358 Win.</b>																					
Rem. 200PSP	Win. W.L.R.	2.78	Win.	24																	
Win. 250ST	Win. W.L.R.	2.78	Win.	24																	
<b>.375 H&amp;H Mag.</b>																					
Hornady 270SP	Rem. 9.5M	3.545	Rem.	24																	
Hornady 300MC	Rem. 9.5M	3.55	Rem.	24																	
<b>.375 Win.</b>																					
Hornady 220FP	Win. W.L.R.	2.555	Win.	24																	
<b>.38/55 Win.</b>																					
IVI 255SP	CCI 200	2.53	IVI	24																	
<b>.378 Wby. Mag.</b>																					
Hornady 270SP	Fed. 215	3.62	Wby.	26																	
Barnes 300 Solid	Fed. 215	3.625	Wby.	26																	
<b>.38/40 Win.</b>																					
150 Sierra JHP	Rem. 2.5	1.585	Rem.	24																	
180 Sierra JHP	Rem. 2.5	1.585	Rem.	24																	
200 Hornady FMJ/FP	Rem. 2.5	1.585	Rem.	24																	

# Centerfire Loads

Cartridge/Bullet	Primer	Min. OAL (inches)	Case	BM Length	2400	Reloder 7	Reloder 15	Reloder 19	Reloder 22	Reloder 25
					Chg Wt	fps	psi x100	Chg Wt	fps	psi x100
<b>.416 Rem. Mag.</b>										
Barnes 300X	Rem. 9.5M	3.6	Rem.	24			90.5 2,890 52.4			
Barnes 350X	Rem. 9.5M	3.6	Rem.	24			85.0 2,610 52.4			
A Square 400 Solid	Rem. 9.5M	3.6	Rem.	24			81.0 2,455 50.9	82.0 2,130 35.6		
Hornady 400RN	Rem. 9.5M	3.565	Rem.	24			82.0 2,445 51.7	83.0 2,140 35.6		
<b>.416 Rigby</b>										
Barnes 300X	Fed. 215	3.65	Fed.	24					103.0 2,590 40.0	
Barnes 350X	Fed. 215	3.675	Fed.	24					101.0 2,455 40.3	
A Square 400 Solid	Fed. 215	3.725	Fed.	24					96.0 2,360 40.3	
Hornady 400RN	Fed. 215	3.725	Fed.	24					96.0 2,355 39.8	
<b>.416 Wby. Mag.</b>										
Barnes 325X	Fed. 215	3.65	Wby.	26					117.0 2,880 51.0	
Barnes 350X	Fed. 215	3.65	Wby.	26					116.9 2,870 51.0	
A Square 400 Solid	Fed. 215	3.68	Wby.	26					117.0 2,705 50.5	
Hornady 400SP	Fed. 215	3.615	Wby.	26					117.5 2,720 51.0	
<b>.44/40 Win.</b>										
Rem. 200SP	Rem. 2.5	1.59	Rem.	24	14.5 1,230 12.5	23.5 1,290 12.1				
Cast 240L	Rem. 2.5	1.58	Rem.	24	12.0 1,130 12.5					
<b>.444 Marlin</b>										
Cast (GC) 240L	Rem. 9.5	2.5	Rem.	24	22.0 1,725 27.9	42.5 2,080 28.9				
Speer 240SP	Rem. 9.5	2.5	Rem.	24	25.0 1,730 21.9	51.0 2,400 38.1				
Hornady 265FP	Rem. 9.5	2.5	Rem.	24	25.0 1,715 22.1	47.0 2,215 35.8				
<b>.45/70 Govt.</b>										
Hornady 300HP	Rem. 9.5	2.475	Rem.	24	30.0 1,650 23.0	50.0 2,075 24.7				
Cast (GC) 385L	Rem. 9.5	2.575	Rem.	24	25.0 1,340 21.3	45.0 1,810 25.1				
Speer 400 N	Rem. 9.5	2.7	Rem.	24	25.0 1,260 24.0	40.0 1,580 24.9				
<b>.458 Win Mag</b>										
Hornady 300HP	Win. W.L.R.	2.95	Win	24	35.0 1,590 13.5	70.0 2,555 41.4				
Cast 385 (GC) lead	Win W.L.R.	3	Win	24	30.0 1,290 14.2	65.0 2,285 42.1				
Hornady 500 FMJ	Win W.L.R.	3.28	Win	24	35.0 1,415 32.6	64.0 2,000 0.0				

FOR LATEST NEW LISTINGS  
CHECK OUT OUR WEBSITE.

www.alliantpowder.com

# BOSS GUN GIVEAWAY!

**Enter  
Now and  
Win this**

**C. Sharps Arms  
Model 1874  
Boss Gun!**

**Valued at over  
\$4,600.00!**

This fine rifle is chambered for the classic .45-70 cartridge and features a 34-inch, No. 1 heavy tapered octagonal barrel with a Rocky Mountain Buckhorn rear sight and globe with post front sight. The stock is xxx fancy American walnut with a cheekrest and accent line topped off with a deluxe long-range tang sight. The smooth steel buttplate, German silver nose cap and French gray receiver group are hand polished to a high luster.

Manufactured in the USA by **C. Sharps Arms Co., Inc.** (PO Box 885, Big Timber MT 59011, Tel: 406-932-4353, Fax: 406-932-4443, Web Site: [www.csharpsarms.com](http://www.csharpsarms.com)), this world-class firearm is of superior quality and accuracy and would make a fine addition to any collection. **Enter now and win!**

## - OFFICIAL RULES -

**NO PURCHASE NECESSARY** You must be 18 years or older to enter the drawing. One entry per subscription. To enter without purchase, print, in block letters, the words BOSS GUN GIVEAWAY across the top of a 4x6 card along with your name, age, address and phone number (one entry per person) and mail to Wolfe Publishing Co., Dept. BGG, 2625 Stearman Rd., Ste. A, Prescott, AZ 86301. The winner will be selected in a random drawing from all eligible entries received by July 31, 2002, and will be notified within 15 days of the drawing. All decisions final. No substitutions for prizes other than as may be necessary due to availability. Applicable taxes and charges not included in the giveaway are the responsibility of the winner. Odds of winning are dependent upon total entries received. Void where prohibited by law and regulation. Employees and families of Wolfe Publishing Co. and C. Sharps Arms Co., Inc. are not eligible to enter. All federal, state and local laws and regulations apply. Winner's name will be published in the magazines following the drawing.

## OFFICIAL ENTRY FORM - Boss Gun Giveaway! ONE YEAR FOR \$1.00!

Buy a subscription to **Handloader** or **Rifle** magazine at the regular price and get the other **FOR ONLY \$1.00!**



✓ Please enter me in the Giveaway and send me one year of both magazines (12 issues, 6 each of **Rifle** & **Handloader**) for only **\$23.00!** (\$22.00 regular one-year subscription plus \$1.00 for the additional subscription.) **Payment must accompany order.** Not good with other promotions. Domestic orders only. Call for Canadian/Foreign rates. Allow 6-8 weeks delivery. Entries must be received by July 31, 2002. You must be 18 years or older to enter.

Name (Please Print) \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

Zip \_\_\_\_\_

Charge to ☐ ☐ ☐ ☐ Card # \_\_\_\_\_

Expires \_\_\_\_\_

Signature \_\_\_\_\_

**For payment by check enclose this card with payment in a stamped envelope and mail to:**

**Wolfe Publishing Co. • 2625 Stearman Rd. • Suite A • Prescott, AZ 86301**

**TOLL FREE: 800-899-7810 • TEL: 928-445-7810 • FAX: 928-778-5124**

**Subscribe and Enter Online @ [www.riflemag.com](http://www.riflemag.com)**

BGG 1/02

## OFFICIAL ENTRY FORM - Boss Gun Giveaway! SPECIAL \$12.97 INTRODUCTORY RATE!

**Save up to 55% off the regular newsstand price on a subscription to **Rifle** or **Handloader** magazine!**

**Please enter me in the Giveaway and send me one of these great deals!**

✓ A one-year subscription (6 issues) of **RIFLE** for only **\$12.97!**

✓ A one-year subscription (6 issues) of **HANDLOADER** for only **\$12.97!**

**Payment must accompany order. First-time subscribers only. Not good with other promotions. Domestic orders only. Call for Canadian/Foreign rates. 6-8 weeks delivery. Entries must be received by July 31, 2002. You must be 18 years or older to enter.**



Name (Please Print) \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

Zip \_\_\_\_\_

Charge ☐ ☐ ☐ ☐ Card # \_\_\_\_\_

Expires \_\_\_\_\_

Signature \_\_\_\_\_

**For payment by check enclose this card along with payment in a stamped envelope and mail to:**

**Wolfe Publishing Company • 2625 Stearman Rd. • Ste. A • Prescott, AZ 86301**

**Toll Free 800-899-7810 • Tel 928-445-7810 • Fax 928-778-5124 Order Online @ [www.riflemag.com](http://www.riflemag.com)**

BGG 1/02

## OFFICIAL ENTRY FORM - Boss Gun Giveaway! TWO ISSUES FREE!

**As a BONUS to our current subscribers, just renew your subscription at the regular rate and receive two extra issues FREE! It's like getting 16 months of your favorite magazine for the price of 12!**

**Enter me in the Giveaway and start my Bonus Subscription today.**

✓ One-year (6 issues + 2 Bonus issues) of **RIFLE** for **\$22.00** (\$28.00 foreign)

☐ One-year (6 issues + 2 Bonus issues) of **HANDLOADER** for **\$22.00** (\$28.00 foreign)

**Payment must accompany order. Not good with other promotions. Allow 6-8 weeks delivery. Entries must be received by July 31, 2002. You must be 18 years or older to enter.**

Name (Please Print) \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_

State \_\_\_\_\_

Zip \_\_\_\_\_

Charge ☐ ☐ ☐ ☐ Card # \_\_\_\_\_

Expires \_\_\_\_\_

Signature \_\_\_\_\_

**For payment by check enclose this card along with payment in a stamped envelope and mail to:**

**Wolfe Publishing Company • 2625 Stearman Rd. • Ste. A • Prescott, AZ 86301**

**Toll Free 800-899-7810 • Tel 928-445-7810 • Fax 928-778-5124 Subscribe Online @ [www.riflemag.com](http://www.riflemag.com)**

BGG 1/02



Postage  
Required  
Post Office will  
not deliver  
without proper  
postage.

WOLFE PUBLISHING COMPANY  
2625 STEARMAN RD STE A  
PRESCOTT AZ 86301-6155



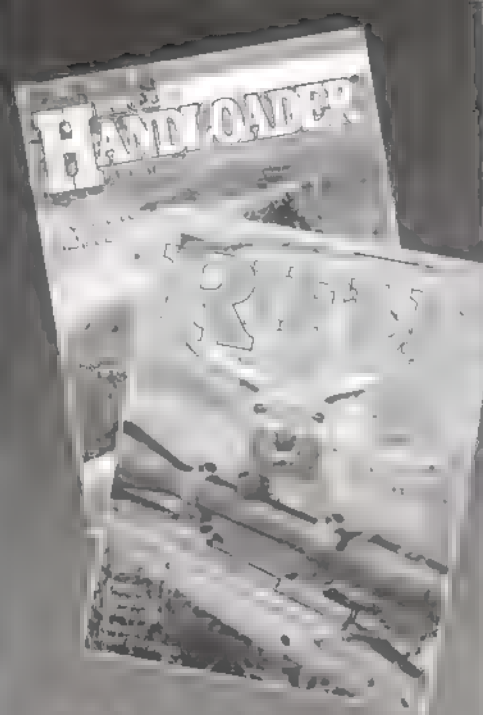
Postage  
Required  
Post Office will  
not deliver  
without proper  
postage.

WOLFE PUBLISHING COMPANY  
2625 STEARMAN RD STE A  
PRESCOTT AZ 86301-6155



Postage  
Required.  
Post Office will  
not deliver  
without proper  
postage.

WOLFE PUBLISHING COMPANY  
2625 STEARMAN RD STE A  
PRESCOTT AZ 86301-6155



## The Obvious Choice by Avid Sportsmen!

*Rifle* and *Handloader* are for you. For those who have a keen interest in hunting, firearms, other shooting activities and the technology behind them, these magazines are designed to further your enjoyment, understanding and performance in your sporting experience.

*Rifle* and *Handloader* intelligently fill your demand for good, honest editorial. Just the best gun magazines available, they're written and presented by the best — just for you, who appreciate the best.



## HAVE YOU BEEN MISSING SOMETHING?



Reloder 15® is Alliant's premium, fast burning rifle powder, specially blended for the demands of varmint shooting. It combines 3,000+ fps velocity with the flat trajectory you need for excellent accuracy. Works great with varmint-weight .243 bullets, or heavier weight .223 and .22-250 bullets.

And Reloder 15 delivers consistency you can count on, shot after shot, year after year. Just as every other Alliant powder has for over a century. Try reloading with

Reloder 15. And start hitting what you've been missing.



Alliant Powder P.O. Box 6, Radford, Virginia 24143 0006 Phone: 800-276-9337 Web site: [www.alliantpowder.com](http://www.alliantpowder.com)

# HANDLOADING PRECAUTION

## Pistol and Revolver Cartridges Special Reloading Precautions

Most pistols and revolvers function best when loaded with a quick-burning powder such as Bullseye. Since peak pressure is reached very quickly, the SEATING DEPTH of the bullet is very important: the deeper the bullet, the higher the pressure. If the bullet is seated too deeply, dangerous pressures will be generated, which could burst the gun and cause severe personal injury (including death).

Equally critical is the powder charge. Guard AGAINST multiple charges when reloading. Certain cartridges (notably .38 Special) have been reloaded accidentally with double and even triple charges, with catastrophic results when fired in the gun.

### A. Prevent deeply seated bullets.

1. Your assembled cartridges must be as long as, or longer than, the minimum length listed for the combination you are reloading.
2. Set your bullet station accordingly and lock tool securely.
3. Keep bullet station clean of accumulating lead and grease.
4. Inspect all loaded rounds for overall length.
5. Be sure every bullet is held tightly by shell mouth, especially pistol loads (recoil drives magazine against bullet noses of contained cartridges).

### B. Prevent multiple charges.

1. **Handloading:** Keep track of every powder charge, then look inside all shells and compare powder levels.
2. **Progressive reloading:** Be sure every shell is truly empty; don't back up the turret; don't jiggle the handle; don't use a shell to clean out the powder train (use a paper cup or equivalent).

### C. Inspection.

1. Discard cases with split mouths.
2. Discard cases with enlarged primer pockets.
3. Do not use cases that are designed for primer-propelled practice cartridges, such cases may not be designed for full power loads.

## Physical Effect of Gun Recoil (Kick)

The rearward motion of every gun, its recoil, increases when heavier shot or heavier bullets are fired, and when higher velocity loads are fired. This motion must be opposed by the shoulder, or the pistol hand, of the shooter. Whenever the recoil is perceptibly annoying to the shooter, accuracy on succeeding firings undoubtedly diminishes.

When the shooting condition demands heavy loads and high velocity, recoil kick can be reduced by using a heavier gun, and by spreading the force over a larger area of the anatomy, such as by using a wider stock, larger grip, plus shoulder pad or softer grip.

Excellent publications available to the reloader, plus his or her own growing sophistication, have generated a wholesome trend away from maximum loads and toward accuracy of loads no more powerful than needed for the intended purpose. Reducing recoil increases accuracy.

Contributing to increased accuracy as well as the pleasantness of shooting is in two main areas:

1. This *Reloaders' Guide* includes many reduced loads.
2. Our research indicates that the burning rate of powders has a modest effect on recoil. For example, whenever two or more powders are listed for the same load, the slower one usually is chosen by the expert shooter as giving milder felt recoil. An intriguing aspect of reloading at home is the freedom to assemble, for example, trap loads with Red Dot or Green Dot powder, then to shoot them alternately to decide which seems more comfortable.

## Handloading Precautions

1. **Understand what you are doing and why.** Read handbooks and manuals on reloading. Talk to experienced reloaders. Write or call suppliers of components if you have questions or are in doubt.
2. Stay **alert** when reloading. **Do not reload when distracted.**
3. Establish a loading procedure and follow it. **Do not vary your sequence of operations.**
4. **Examine empty cases** (shotshell or metallic) to be sure they are in good condition before reloading. Never force live cartridges into or out of the chamber of a gun.
5. **Do not use cases that are designed for primer-propelled practice cartridges;** such cases may not be designed for full power loads.
6. **Do not ream out or enlarge flash holes of metallic cartridge cases.** This may change the ignition rate and result in dangerous pressures.
7. **Do not punch out live primers.** Fire the empty primed shells in a gun.
8. **Do not mix primers.** Primers differ in brisance of ignition, which affects pressure and velocity. Use only the primer listed.
9. **The shotshell loading data in the *Reloaders' Guide* are for LEAD SHOT only.** Use steel shot only as specified in the steel shot data section (pgs. 6-7).
10. One-piece plastic wads for shotshells vary in compressibility and gas-sealing effectiveness. Use only the wad listed.
11. If you "throw," or measure powder charges by volume, check-weigh the charge frequently. **Do not mix powders.**
12. **Do not use powders near a flame, spark-producing machinery, or heating device.** Do not expose powders to temperatures above 100°F.
13. Keep out of reach of children.
14. **Do not smoke while reloading.**

# & TECHNICAL DATA

## Smokeless Powders for Reloading

We currently offer 15 powders for use in reloading. These are listed in the order of decreasing burning rates. Each powder listed is "slower" than those preceding it and "faster" than those following it. Among these Alliant smokeless powders, for example, Red Dot® burns more slowly than Bullseye®, but faster than Green Dot®.

Powder	Principal Use <sup>1</sup>
Bullseye®	Handgun Loads
Red Dot®	Light and Standard Shotgun Loads, 12-Gauge
American Select®	12-Gauge Target Loads
Green Dot®	Standard and Medium Shotgun Loads, 12- and 16-Gauge
Unique®	All Around Shotgun Powder, 12, 16, 20-, and 28 Gauge
Power Pistol®	High performance pistol loads such as the 9mm, 40 S&W, and 10mm
Herco®	Heavy Shotgun Loads, 10-, 12-, 16-, 20-, and 28-Gauge
Blue Dot®	Magnum Shotgun Loads, 10-, 12-, 16-, 20-, and 28-Gauge
Steel™	Steel Shotgun, 10- and 12-Gauge
2400®	Magnum Handgun Loads
Reloder® 7	Light Rifle Loads
Reloder® 15	Medium Rifle Loads
Reloder® 19	Magnum Rifle Loads
Reloder® 22	Magnum Rifle Loads
Reloder® 25	Magnum Rifle Loads

### Can Also be Used In<sup>1</sup>

12-Gauge Light Target Loads  
Handgun Loads  
Handgun Loads  
Handgun Loads  
Handgun Loads  
Moderate pressure pistol cartridges like the .38 Special, .380 Auto, and 45 ACP  
Heavy Handgun Loads  
Magnum Handgun Loads  
Magnum, Shotgun and Turkey Loads  
Some Rifle and Shotgun Loads  
Silhouette Loads  
Silhouette Loads  
Target and hunting rifle loads  
Maximum hunting loads  
Maximum hunting loads

<sup>1</sup>Use only in the loads printed in this Guide.

## Packaging

Powder	1-lb Canister	4-lb Canister	5-lb Canister	8-lb Keg
Bullseye, Red Dot, American Select, Green Dot, Unique, Herco, 2400	x	x		x
Power Pistol	x	x		
Blue Dot	x		x	
Reloder Series	x		x	
Steel	x	x		

All 15 powders are always in stock at distributors' magazines throughout the U.S.A., and in most countries where reloading is legally permitted and popular. Any reloader unable to purchase any of the 15 powders at retail stores that handle powders should write to the address on the back cover. We cannot ship directly, but we will endeavor to correct supply shortages in your area.

## Powder Information

Smokeless sporting propellants are of two basic types - single base and double base. Single base propellants derive their energy from nitrocellulose and double base from a combination of nitrocellulose and nitroglycerin. Alliant propellants range from the "near" single-base American Select (2% nitroglycerin) to the high nitroglycerin (40%) double base Bullseye. In addition, our propellants contain stabilizers for long storage life and various other ballistic modifiers which reduce flash, improve combustion efficiency, and promote clean burning.

Some of our propellants also have a chemical coating on the surface to control the burning rate. This creates a progressive burn for achieving higher velocities at lower pressures. All of our propellants have a graphite glaze, which ensures smooth, consistent metering of charges through volumetric reloaders.

Alliant propellants are extruded and cut into circular flakes or cylinders by precision dies and cutting equipment. Granule size tolerances are very tight and uniform to prevent separation of different size granules and to ensure consistent ballistic performance, load after load.

By utilizing a precise combination of chemical formulation, granule size, and chemical coatings, we are able to tailor the burning characteristics of our propellants to achieve the best overall performance in a wide range of loads.

Because each of our propellants is specifically engineered to have different burn rates and performance characteristics, **NEVER BLEND OR MIX DIFFERENT POWDERS, AND USE ONLY THE GRADE AND QUANTITY RECOMMENDED IN THIS RELOADER'S GUIDE.**

All powders burn with great precision and rapidly inside the gun chamber, generating the hot, high-pressure gas that accelerates the bullet (or shot) and drives it toward the target. **It is critically important for safety that the powder used is matched to the bullet (or shot) weight and other factors; otherwise, the gun parts may be deformed or may even burst and cause serious personal injury (including death).** Shot-to-shot accuracy can also be degraded by deviations from recommended loads. Even after 80 years of producing and testing powders, ballisticians are unable to calculate and predict exact ballistic results; we must test fire our powders with each set of components and record the results. Therefore, **the ballistic values and recommended combinations listed in this booklet must be followed without deviation.**

**Working up charges:** For shotgun loads use the charge schedule shown. If wever for all rifle and pistol loads first load and fire a few cartridges at 10% less charge than recommended, watching for any signal of excessive pressure - difficult extraction, flattened or blown primers, unusual recoil.

**Handgun loads:** Many pistol and revolver loads require only small amounts of fast burning powders, therefore - go against the - dental double charges and even in up charges when loading with handloads with progressive loading devices - 2. be sure that each bullet is positioned in the case so that the minimum overall length is not violated.

## Dram Equivalent

Prior to the commercialization of smokeless powder, shotgun shells were loaded with black powder. The weight measurement system used for black powder was "drams." Compared with black powder, **smokeless powder is more dense and MUCH more energetic, so it cannot safely be measured and used like black powder.** Indeed, a different weight system was selected for smokeless powder: "grains," wherein 7,000 grains equal one pound.

Since many shooters still wanted to be able to compare their smokeless powder loads with the original black powder loads, the term "dram equivalent" evolved. Simply stated, the dram equivalent is an indicator of the velocity of a particular shot load. **But note that the charge and weight of smokeless powder must not be calculated from the dram equivalent.**

## Notice

We have inserted information on the properties and storage of smokeless powder for your understanding, so that you can avoid unnecessary risks when using it. This information, on pages 51 and 52, was published initially by the Sporting Arms and Ammunition Manufacturers' Institute, Inc., several years ago in the interest of safety. You must read these pages carefully and comply with the precautions listed. If you have questions, please call or write to us at the address on the back cover.

## Important Safety and Health Precautions

To perform in a gun, powders must ignite easily and burn rapidly. These characteristics require use of common sense to avoid accidents. **YOU MUST OBSERVE THESE PRECAUTIONS:**

1. **DO NOT** smoke when reloading.
2. **DO NOT** use spark-producing tools.
3. **DO NOT** mix powders of different kinds.
4. **DO NOT** leave powder where children can get it.
5. **DO NOT** try to load when distracted.
6. Avoid an open fire or working near spark-producing machinery.
7. Pour out only the amount of powder needed for immediate work.
8. Check the powder measure each time it is used. Make sure the settings have not been accidentally changed. Check-weigh "thrown charges" frequently.
9. Clean up any spilled powders. Use a brush and dustpan; do not use a vacuum cleaner. Dispose of spilled powder as described in the SAAMI pages of this Guide.
10. Store powder only in its original container, which was carefully designed for this usage. **DO NOT REPACKAGE.** Do not purchase or accept any Alliant powder not in its original, **FACTORY-SEALED** container.
11. Be sure the powder container is completely empty before discarding. Do not use the container to store other powders or materials, or for any other purpose.
12. Always keep in mind that smokeless powder is an explosive material and highly flammable. It should always be stored and handled in such a way as to avoid impact, friction, heat, sparks, or flame.
13. Wear safety glasses when reloading.
14. This material contains nitroglycerin. Inhalation, skin contact, or ingestion may cause severe headache, nausea, and lowering of blood pressure. **THEREFORE, THE FOLLOWING PRECAUTIONS MUST BE OBSERVED WHEN HANDLING POWDERS:**
  - A. Do not take internally. In case of ingestion, cause vomiting. Call a physician.
  - B. Avoid contamination of food, beverages, or smoking materials.
  - C. Avoid breathing dust. Ensure adequate ventilation during handling.
  - D. Wash thoroughly after handling and before eating, drinking, or smoking.
  - E. Do not carry powder in clothing.

You must also always remember:

1. **Establish a routine for reloading.** It will result in more uniform loads and less chance of error.
2. Some primers are more powerful than others (they produce more gas at a higher temperature). **Use only the primers specified herein.**
3. Shotshell wads differ in their sealing ability. **Use only the load combinations specified herein.**
4. If you use cast bullets, their diameter, hardness, lubrication, and crimp will affect the ballistics.
5. **The shotshell loads in this booklet are for use with LEAD SHOT ONLY!** For steel shot see special steel section, pages 30-31.
6. **Use only the brands of powder and components shown in our tables. Do not substitute other types.**
7. Discharging firearms in poorly ventilated areas, cleaning firearms, or handling ammunition may result in exposure to lead, a substance known to cause birth defects, reproductive harm, and other serious physical injury. **Have adequate ventilation at all times. Wash hands and face thoroughly after handling and before coming in contact with food, chewing materials, and smoking material.**

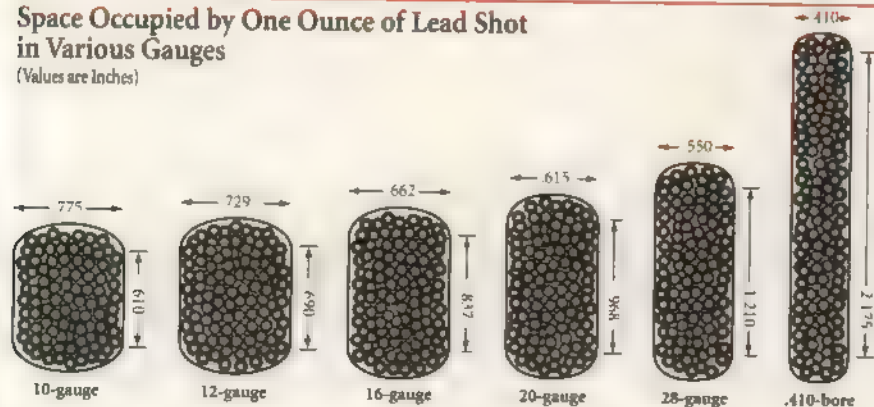
## Reference Tables

**Approximate Number of Pellets in Specific Weights of Lead Shot (Sizes 2 Through 9)**

Weight, oz.	No. 2	No. 4	No. 5	No. 6	No. 7½	No. 8	No. 8½	No. 9
½	45	67	85	112	175	205	242	292
¾	67	101	127	168	262	308	363	439
1	79	118	149	197	306	359	425	512
1¼	90	135	170	225	350	410	485	585
1½	101	152	191	253	393	461	545	658
1¾	112	169	213	281	437	513	605	731
2	124	186	234	309	481	564	665	804
2½	135	202	255	337	525	615	730	877

**Space Occupied by One Ounce of Lead Shot in Various Gauges**

(Values are inches)



**Internal Diameter of the Barrel in Several Shotgun Gauges**

10-Gauge—0.775-Inch  
 12-Gauge—0.729-Inch  
 16-Gauge—0.662-Inch  
 20-Gauge—0.615-Inch  
 28-Gauge—0.550-Inch  
 .410-Bore—0.410-Inch

## Reference Tables (continued)

### Number of Shells That Can Be Loaded with One Pound of Powder at Various Grains Per Load

(The term grain is a measure of weight; 7,000 grains equal one pound)

Grains/ Load	Loads/ Pound	Grains/ Load	Loads/ Pound	Grains/ Load	Loads/ Pound	Grains/ Load	Loads/ Pound	Grains/ Load	Loads/ Pound	Grains/ Load	Loads/ Pound
12	583	23	304	34	205	45	156	56	125	67	104
13	538	24	291	35	200	46	152	57	123	68	103
14	500	25	280	36	194	47	149	58	121	69	101
15	466	26	269	37	189	48	146	59	119	70	100
16	437	27	259	38	184	49	143	60	117	71	99
17	411	28	250	39	179	50	140	61	115	72	97
18	388	29	241	40	175	51	137	62	113	73	96
19	368	30	233	41	170	52	135	63	111	74	95
20	350	31	225	42	166	53	132	64	109	75	93
21	333	32	218	43	162	54	130	65	108	76	92
22	318	33	212	44	159	55	127	66	106	77	91

### Typical Percentage of Pellets in a 30-Inch Circle at 40 Yards (Pattern) for Various Choke Sizes

(Choke is a Constriction at the Muzzle of a Shotgun Barrel)

Full Choke—70%

Improved Modified Choke—65 to 70%

Modified Choke—55%

Improved Cylinder—50%

True Cylinder—40%

## Ballistic Data

The velocity and pressure obtained with the specific combinations of shell, wad, primer, bullet or shot weight, powder, and powder weight provided in this booklet were obtained in a laboratory, where considerable effort is made to control the load and test conditions. Velocity was measured with a chronograph (electric stopwatch). Pressure was measured either by compressing copper cylinders (C.U.P.), or electronically, by use of a piezoelectric transducer (P.S.I.).

**Guns are designed to take a considerable amount of internal pressure, but if this is exceeded, they burst violently. Be alert to signs of excess pressure, such as heavy recoil, flattened primers, or blown primers. Don't make changes in the suggested loads.**

Tone variations (shaded areas) used in the reloading tables are for ease of reading and do not represent preferred loads.

**The quantity of powder to use is listed in GRAINS, which are a measure of weight, under each powder column.**

Every reloader needs a good-quality scale for weighing each powder charge, or for checking the weight of powder thrown by volumetric loaders.

### Special Notes Regarding Components Other Than Powder

**A. Shotgun Shells.** Manufacturers may sell ammunition under different brand names that are identical for reloading purposes. Following are popular variations. When in doubt, consult the ammunition producer.

- **Federal Hi Power Plastic** same as **Duck and Pheasant, Field, Game, and Dove and Squirrel or Top Gun.**
- **Federal Premium** (Integral Base Wad)
- **Remington-Peters.** Same as Mohawk brand shells.
- **Remington-STS Type.** Same as **Premier, Nitro 27, GunClub, and Game Loads**
- **Winchester AA-Type.** Old and new style hulls are interchangeable.
- **Winchester Polyformed Type** (Reifenhauser Tube) same as **Duck and Pheasant, Dove and Squirrel.**

#### B. Primers

- **CCI 109 and CCI 209** are ballistically identical and can be interchanged.
- **CCI 209M** (Magnum) is "hotter" and cannot be substituted for CCI 109 or 209. Use 209M only as listed.
- **Rem. 209** is "hotter" and cannot be substituted for Rem. 97★ or Rem. 209P primer.
- **Rem. 209P** is interchangeable with Rem. 97★ primer.
- **Federal 209A** is "hotter" and cannot be substituted for Federal 209.

**C. Wads.** Card wads and fiber wads are used for certain slug and buckshot loads and a few light shotshell loads. **Do not interchange wads.**

**D. Shot.** Use only clean lead shot. **DO NOT USE STEEL SHOT IN SHOTSHELL LOADS EXCEPT AS LISTED IN STEEL™ SECTION**

**E. Shot Buffers.** Do not add any buffers or fillers of any kind to shotshell loads listed in this Guide.

**F. Cards and Fillers.** For revolver, pistol, and rifle cartridge reloading, do not add any cards, kapok, or fillers of any kind to loads listed in this Guide.

### Black Powder

Black powder is entirely different from smokeless powder. NEVER substitute one for the other. Smokeless powders have much more energy than black powder. NEVER attempt to use smokeless powder in black powder guns or saluting cannon; they may blow up and cause serious personal injury (including death).

## Powder Bushing Charts

A reloading scale is **required** to check the nominal weight of a powder charge.

Powder bushings can vary in the charge weight they drop and could vary as much as **several grains** under certain conditions.

Powder density, moisture content, and loading technique can cause a variation from the bushing weights listed on the charts. Also, the loading machine vibration affects charge weights. A complete loading cycle should be completed to **assure** an average powder charge weight.

The information in these tables has been supplied by the reloading machine manufacturers and is **not a reloading recommendation** or a result of Alham's testing.

### Lee Load-All Capacity Bushing Chart (Units shown in grains)

Bushing #	.095	.100	.105	.110	.116	.122	.128	.134	.141	.148	.155	.163	.171	.180	.189	.198
Red Dot	11.0	11.6	12.2	12.8	13.5	14.2	14.8	15.5	16.4	17.2	18.0	18.9	19.8	20.9	21.9	23.0
Amer-Select	11.6	12.2	12.8	13.4	14.2	14.9	15.6	16.4	17.2	18.1	18.9	19.9	20.9	22.0	23.1	24.2
Green Dot	12.3	13.0	13.6	14.3	15.1	15.8	16.6	17.4	18.3	19.2	20.1	21.2	22.2	23.4	24.5	25.7
Blue Dot	18.0	19.0	19.9	20.8	22.0	23.1	24.3	25.4	26.7	28.0	29.4	30.9	32.4	34.1	35.8	37.5
Unique	14.3	15.0	15.8	16.5	17.4	18.3	19.2	20.1	21.2	22.2	23.3	24.5	25.7	27.0	28.4	29.7
Herco	13.9	14.6	15.3	16.1	16.9	17.8	18.7	19.6	20.6	21.6	22.6	23.8	25.0	26.3	27.6	28.9
2400	21.0	22.1	23.2	24.3	25.6	27.0	28.3	29.6	31.2	32.7	34.3	36.0	37.8	39.8	41.8	43.8

\*NOTE: Only available with Lee Load-Fast.

### Hornady Powder Bushing Chart for 366 Auto and Apex 91 (Units shown in grains)

Grains	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	
Red Dot			384	393	405	423	438	453	468	480	489	498	510	519																						
American Select							417	423	432	441	456	468	477	483																						
Green Dot			363	378	390	405	420	435	447	456	468	480	492	501	513	522	534	—	549	558																
Unique				342	354	369	381	393	405	414	423	435	444	453	465	474	483	492	501	—	510															
Herco				357	369	381	393	405	414	426	438	450	462	471	477	489	498	—	513	522	531	—	549	558	564	573	—	588	594							
Blue Dot									366	372	381	390	396	408	414	423	435	441	447	459	468	474	483	489	495	501	510	516	522	531	534	543	549	555	561	
2400			256	266	—	281	300	312	324	330	339																									

### Ponsness/Warren Powder Bushing Chart (Units shown in grains)

Bushing #	1A	2A	3A	A	B	C	C1	D	D1	E	E1	E2	F	F1	F2	G	G1	H	I	J	J1	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA		
Bullseye										16.2	16.8	17.7	18.7	19.4																										
Red Dot										11.6	12.2	12.9	13.4	13.7	14.5	14.7	15.7	16.5	16.8	17.3	17.6	18.5	19.4	20.7	20.9	21.3	21.9	22.9												
American Select																16.4	17.5	18.2	18.8	19.4	19.9	20.6	22.0																	
Green Dot										11.7	12.3	13.1	13.6	13.8	14.7	14.9	15.9	16.7	17.0	17.5	17.9	18.8	19.6	21.1	21.3	21.8	22.3	23.2	23.6	25.3	26.5									
Unique										12.6	14.2	14.8	15.6	16.5	17.2	17.5	18.7	19.0	20.2	21.2	21.7	22.3	22.7	24.0	25.0	26.0	27.1	27.6												
Herco										12.3	13.8	14.4	15.1	16.0	16.6	16.9	18.0	18.3	19.5	20.5	20.9	21.5	21.9	23.0	24.0	25.7	26.0	26.5	27.1	28.1	28.8	30.7	32.1	33.1	34.9	35.4	37.2			
Blue Dot										16.4	18.4	19.2	20.1	21.3	22.2	22.6	23.9	24.3	25.9	27.2	27.7	28.5	29.1	30.6	31.9	34.2	34.5	35.2	36.0	37.5	38.1	40.7	42.5	43.8	46.5	47.2	49.5	55.7		
2400		12.3	13.2	15.2	16.1	16.8	17.6	18.3	19.0	21.3	22.2	23.3	24.7	25.7	26.1	27.7	28.2	30.0	31.5	32.2	33.1	33.7	35.5	37.1	39.8	40.2	41.1	42.0	43.0	44.5	47.5	49.8								

### MEC Powder Bushing Chart (Units shown in grains)

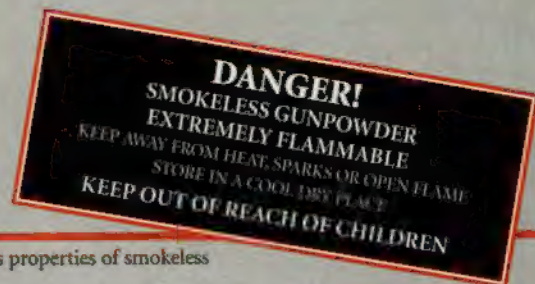
Bushing #	10	11	12	12A	13	13A	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Bullseye	8.6	9.1	9.6	10.1	10.6	11.2	11.7	12.3	12.9	13.5	14.1	14.8	15.4	16.1	16.8	17.5	18.2	18.9	19.6	20.4	21.2	21.9	22.8	23.7
Red Dot	6.3	6.7	7.1	7.5	7.9	8.3	8.7	9.2	9.6	10.1	10.6	11.1	11.6	12.1	12.6	13.1	13.7	14.2	14.9	15.7	16.4	17.1	17.8	18.5
American Select	6.9	7.3	7.7	8.2	8.6	9.1	9.6	10.1	10.6	11.1	11.7	12.2	12.8	13.3	13.9	14.5	15.1	15.7	16.4	17.0	17.7	18.3	19.0	19.7
Green Dot	6.7	7.2	7.6	8.0	8.4	8.9	9.3	9.8	10.3	10.8	11.3	11.8	12.4	12.9	13.5	14.0	14.6	15.2	15.8	16.4	17.0	17.7	18.3	19.0
Unique	7.5	7.9	8.4	8.9	9.4	9.9	10.4	10.9	11.4	12.0	12.6	13.1	13.7	14.5	15.1	15.8	16.4	17.1	17.7	18.4	19.1	19.8	20.5	21.1
Herco	7.9	8.3	8.8	9.3	9.8	10.4	10.9	11.4	12.0	12.6	13.2	13.8	14.4	15.0	15.7	16.3	17.0	17.7	18.4	19.1	19.8	20.6	21.3	22.1
Blue Dot	10.8	11.3	11.9	12.5	13.1	13.7	14.4	15.0	15.7	16.3	17.0	17.7	18.4	19.2	20.1	21.0	21.9	22.8	23.7	24.6	25.5	26.4	27.3	28.2
2400	11.8	12.5	13.3	14.0	14.8	15.6	16.4	17.2	18.1	18.9	19.8	20.7	21.7	22.6	23.6	24.6	25.6	26.6	27.7	28.8	29.9	31.0	32.1	33.3

### MEC Powder Bushing Chart continued (Units shown in grains)

Bushing #	32	33	34	35	36	37	38	38A	39	39A	40	40A	41	41A	42	42A	43	43A	44	44A	45	45A	46
Bullseye	24.6	25.5	26.4	27.3	28.2	29.1	30.1	31.0	31.9	32.8	33.7	34.7	35.7	36.9	38.1	39.4	40.7	42.0	43.3	44.6	46.0	47.4	48.8
Red Dot	19.2	19.9	20.6	21.3	21.9	22.7	23.3	24.1	24.7	25.2	25.9	26.6	27.3	27.9	28.4	29.3	29.9	30.8	31.5	32.1	32.7	33.4	34.1
American Select	20.4	21.1	21.8	22.6	23.3	24.1	24.9	25.7	26.5	27.3	28.1	28.9	29.8	30.7	31.5	32.4	33.3	34.2	35.2	36.4	37.0	38.0	39.0
Green Dot	19.6	20.3	21.0	21.7	22.4	23.2	23.9	24.7	25.4	26.2	27.0	27.8	28.6	29.4	30.3	31.1	32.0	32.8	33.7	34.6	35.5	36.4	37.4
Unique	21.7	22.5	23.2	24.0	24.8	25.6	26.5	27.3	28.2	29.0	29.9	30.8	31.7	32.6	33.5	34.5	35.4	36.4	37.4	38.4	39.4	40.4	41.4
Herco	22.9	23.7	24.5	25.3	26.2	27.0	27.9	28.8	29.7	30.6	31.5	32.4	33.4	34.3	35.3	36.3	37.3	38.3	39.3	40.4	41.4	42.5	43.6
Blue Dot	29.1	30.5	31.6	32.7	33.8	35.0	36.1	37.3	38.5	39.7	40.9	42.2	43.4	44.7	46.0	47.4	48.7	50.1	51.5	52.9	54.3	55.7	57.2
2400	34.5	35.7	36.9	38.1	39.4	40.7	42.0	43.3	44.6	46.0	47.4	48.8	50.2	51.6	53.1	54.6	56.1	57.6	59.2	60.7	62.3	63.9	65.6

# S A A M I

SPORTING ARMS AND AMMUNITION MANUFACTURERS' INSTITUTE, INC.  
Flintlock Ridge Office Center, 11 Mile Hill Road, Newtown, CT 06470-2359



## Properties and Storage of Smokeless Powder

Ammunition handloading has become increasingly popular in recent years. This information discusses properties of smokeless powder and offers recommendations for its storage.

This information is intended to increase the knowledge of all concerned individuals and groups regarding smokeless powder. The statements and recommendations made are not intended to supersede local, state, or Federal regulations. Proper authorities should be consulted on regulations for storage and use of smokeless powder in each specific community. A leaflet entitled *"Sporting Ammunition Primers: Properties, Handling, & Storage for Hand Loading"* supplements this information on smokeless powder.

### Properties of Smokeless Powder

Smokeless powders, or propellants, are essentially mixtures of chemicals designed to burn under controlled conditions at the proper rate to propel a projectile from a gun. Smokeless powders are made in three forms:

1. Thin, circular flakes or wafers
2. Small cylinders
3. Small spheres

Single-base smokeless powders derive their main source of energy from nitrocellulose.

The energy released from double-base smokeless powders is derived from both nitrocellulose and nitroglycerin.

All smokeless powders are extremely flammable; by design, they are intended to burn rapidly and vigorously when ignited.

Oxygen from the air is not necessary for the combustion of smokeless powders since they contain sufficient built-in oxygen to burn completely, even in an enclosed space such as the chamber of a firearm.

In effect, ignition occurs when the powder granules are heated above their ignition temperature. This can occur by exposing powder to:

1. A flame such as a match or primer flash.
2. An electrical spark or the sparks from welding, grinding, etc.
3. Heat from an electric hot plate or a fire directed against or near a closed container even if the powder itself is not exposed to the flame.

When smokeless powder burns, a great deal of gas at high temperature is formed. If the powder is confined, this gas will create pressure in the surrounding structure. The rate of gas generation is such, however, that the pressure can be kept at a low level if sufficient space is available or if the gas can escape.

In this respect smokeless powder differs from blasting agents or high explosives such as dynamite or blasting gelatin, although smokeless powder may contain chemical ingredients common to some of these products.

High explosives such as dynamite are made to detonate, that is, to change from solid state to gaseous state with evolution of intense heat at such a rapid rate that shock waves are propagated through any medium in contact with them. Such shock waves exert pressure on anything they contact, and, as a matter of practical consideration, it is almost impossible to satisfactorily vent away from the effects of a detonation involving any appreciable quantity of dynamite.

Smokeless powder differs considerably in its burning characteristics from common "black powder."

Black powder burns essentially at the same rate out in the open (unconfined) as when in a gun.

When ignited in an unconfined state, smokeless powder burns inefficiently with an orange-colored flame. It produces a considerable amount of light brown noxious smelling smoke. It leaves a residue of ash and partially burned powder. The flame is hot enough to cause severe burns.

The opposite is true when it burns under pressure as in a cartridge fired in a gun. Then it produces very little smoke, a small glow, and leaves very little or no residue. The burning rate of smokeless powder increases with increased pressure.

If burning smokeless powder is confined, gas pressure will rise and eventually can cause the container to burst. Under such circumstances, the bursting of a strong container creates effects similar to an explosion.

For this reason, the Department of Transportation (formerly Interstate Commerce Commission) sets specifications for shipping containers for propellants and requires tests of loaded containers — under actual fire conditions — before approving them for use.

When smokeless powder in D.O.T. approved containers is ignited during such tests, container seams split open or lids pop off — to release gases and powder from confinement at low pressure.

### How to Check Smokeless Powder for Deterioration

Although modern smokeless powders are basically free from deterioration under proper storage conditions, safe practices require a recognition of the signs of deterioration and its possible effects.

Powder deterioration can be checked by opening the cap on the container and smelling the contents. Powder undergoing deterioration has an irritating acidic odor. (Don't confuse this with common solvent odors such as alcohol, ether and acetone.)

Check to make certain that powder is not exposed to extreme heat as this may cause deterioration. Such exposure produces an acidity which accelerates further reaction and has been known, because of the heat generated by the reaction, to cause spontaneous combustion.

Never salvage powder from old cartridges and do not attempt to blend salvaged powder with new powder. Don't accumulate old powder stocks.

The best way to dispose of deteriorated smokeless powder is to burn it out in the open at an isolated location in small shallow piles (not over 1" deep). The quantity burned in any one pile should never exceed one pound. Use an ignition train of slow burning combustible material so that the person may retreat to a safe distance before powder is ignited.

### Considerations for Storage of Smokeless Powder

Smokeless powder is intended to function by burning, so it must be protected against accidental exposure to flame, sparks or high temperatures.

For these reasons, it is desirable that storage enclosures be made of insulating materials to protect the powder from external heat sources.

Once smokeless powder begins to burn, it will normally continue to burn (and generate gas pressure) until it is consumed.

D.O.T. approved containers are constructed to open up at low internal pressures to avoid the effects normally produced by the rupture or bursting of a strong container.

Storage enclosures for smokeless powder should be constructed in a similar manner:

1. Of fire-resistant and heat-insulating materials to protect contents from external heat.
2. Sufficiently large to satisfactorily vent the gaseous products of combustion, which would result if the quantity of smokeless powder within the enclosure accidentally ignited.

If a small, tightly enclosed storage enclosure is loaded to capacity with containers of smokeless powder, the walls of the enclosure will expand or move outwards to release the gas pressure — if the powder in storage is accidentally ignited.

Under such conditions, the effects of the release of gas pressure are similar or identical to the effects produced by an explosion.

Hence only the smallest practical quantities of smokeless powder should be kept in storage, and then in strict compliance with all applicable regulations and recommendations of the National Fire Protection Association (reprinted at end of leaflet).

## Recommendations for Storage of Smokeless Powder

**STORE IN A COOL, DRY PLACE.** Be sure the storage area selected is free from any possible sources of excess heat and is isolated from open flame, furnaces, hot water heaters, etc. Do not store smokeless powder where it will be exposed to the sun's rays. Avoid storage in areas where mechanical or electrical equipment is in operation. Restrict from the storage areas heat or sparks which may result from improper, defective or overloaded electrical circuits.

**DO NOT STORE SMOKELESS POWDER IN THE SAME AREA WITH SOLVENTS, FLAMMABLE GASES, OR HIGHLY COMBUSTIBLE MATERIALS.**

**STORE ONLY IN DEPARTMENT OF TRANSPORTATION APPROVED CONTAINERS.**

Do not transfer the powder from an approved container into one which is not approved.

**DO NOT SMOKE IN AREAS WHERE POWDER IS STORED OR USED. PLACE APPROPRIATE "NO SMOKING" SIGNS IN THESE AREAS.**

**DO NOT SUBJECT THE STORAGE CABINETS TO CLOSE CONFINEMENT.**

**STORAGE CABINETS SHOULD BE CONSTRUCTED OF INSULATING MATERIALS AND WITH A WEAK WALL, SEAMS OR JOINTS TO PROVIDE AN EASY MEANS OF SELF-VENTING.**

**DO NOT KEEP OLD OR SALVAGED POWDERS.** Check old powders for deterioration regularly. Destroy deteriorated powders immediately.

**OBEY ALL REGULATIONS REGARDING QUANTITY AND METHODS OF STORING.** Do not store all your powders in one place. If you can, maintain separate storage locations. Many small containers are safer than one or more large containers.

**KEEP YOUR STORAGE AND USE AREA CLEAN.** Clean up spilled powder promptly. Make sure the surrounding area is free of trash or other readily combustible materials.

## 10-3 Smokeless Propellants.

**10-3.1** Quantities of smokeless propellants not exceeding 25 lb (11.3 kg) in shipping containers approved by the U.S. Department of Transportation, may be transported in a private vehicle.

**10-3.2** Quantities of smokeless propellants exceeding 25 lb (11.3 kg) but not exceeding 50 lb (22.7 kg), transported in a private vehicle, shall be transported in a portable magazine having wood walls of at least 1-in. (25.4-mm) nominal thickness.

**10-3.3** Transportation of more than 50 lb (22.7 kg) of smokeless propellants in a private vehicle is prohibited.

**10-3.4** Commercial shipments of smokeless propellants in quantities not exceeding 100 lb (45.4 kg) are classified for transportation purposes as flammable solids when packaged according to U.S. Department of Transportation Hazardous Materials Regulations (Title 49, Code of Federal Regulations, Part 173.197a), and shall be transported accordingly.

**10-3.5** Commercial shipments of smokeless propellants exceeding 100 lb (45.4 kg) or not packaged in accordance with the regulations cited in 10-3.4 shall be transported according to U.S. Department of Transportation regulations for Class B propellant explosives.

**10-3.6** Smokeless propellants shall be stored in shipping containers specified by U.S. Department of Transportation Hazardous Materials Regulations.

**10-3.7** Smokeless propellants intended for personal use in quantities not exceeding 20 lb (9.1 kg) may be stored in original containers in residences. Quantities exceeding 20 lb (9.1 kg), but not exceeding 50 lb (22.7 kg), may be stored in residences if kept in a wooden box or cabinet having walls of at least 1-in. (25.4-mm) nominal thickness.

**10-3.8** Not more than 20 lb (9.1 kg) of smokeless propellants, in containers of 1-lb (0.45-kg) maximum capacity, shall be displayed in commercial establishments.

**10-3.9** Commercial stocks of smokeless propellants shall be stored as follows:

- (a) Quantities exceeding 20 lb (9.1 kg), but not exceeding 100 lb (45.4 kg), shall be stored in portable wooden boxes having walls of at least 1-in. (25.4 mm) thickness.
- (b) Quantities exceeding 100 lb (45.4 kg), but not exceeding 800 lb (363 kg), shall be stored in nonportable storage cabinets having walls of at least 1-in. (25.4-mm) thickness. Not more than 400 lb (181 kg) may be stored in any one cabinet and cabinets shall be separated by a distance of at least 25 ft. (7.63 m) or by a fire partition having a fire resistance of at least 1 hour.
- (c) Quantities exceeding 800 lb (363 kg), but not exceeding 5,000 lb (2268 kg), may be stored in a building if the following requirements are met:
  1. The warehouse or storage room shall not be accessible to unauthorized personnel.
  2. Smokeless propellant shall be stored in nonportable storage cabinets having wood walls at least 1 in. (25.4-mm) thick and having shelves with no more than 3 ft (0.92 m) separation between shelves.
  3. No more than 400 lb (181 kg) shall be stored in any one cabinet.
  4. Cabinets shall be located against walls of the storage room or warehouse with at least 40 ft (12.2 m) between cabinets.
  5. Separation between cabinets may be reduced to 20 ft. (6.1 m) if barricades twice the height of the cabinets are attached to the wall, midway between each cabinet. The barricades shall extend at least 10 ft (3 m) outward, shall be firmly attached to the wall, and shall be constructed of ¼-in. (6.4-mm) boiler plate, 2-in. (51-mm) thick wood, brick, or concrete block.
  6. Smokeless propellant shall be separated from materials classified by the U.S. Department of Transportation as flammable liquids, flammable solids, and oxidizing materials by a distance of 25 ft (7.63 m) or by a fire partition having a fire resistance of at least 1 hour.
  7. The building shall be protected by an automatic sprinkler system installed according to NFPA 13, Standard for the Installation of Sprinkler Systems.
- (d) Smokeless propellants not stored according to (a), (b) and (c) above shall be stored in a Type 4 magazine constructed and located according to Chapter 6.

*Reprinted with permission from NFPA 495-85, Standard for the Manufacture, Transportation, Storage and Use of Explosive Materials, © 1985, National Fire Protection Association, Quincy, MA 02269. This reprinted material is not the complete and official position of the NFPA on the referenced subject, which is represented by the Standard in its entirety.*

## Some Publications on Reloading

These booklets, pertinent to reloading, are available from these and other sources.

Title	Publisher
<i>Basic Rules for Reloading Safety</i>	National Reloading Manufacturers Association 4905 S.W. Griffith Drive Beaverton, OR 97005
<i>NRA Guide to Reloading</i>	NRA Bookservice 11250 Waples Mill Road Fairfax, VA 22030
<i>Speer Reloading Manual</i>	Blount Industries Box 856 Lewiston, ID 83501
<i>RCBS Reloading Guide</i>	RCBS Box 1919 Oroville, CA 95965
<i>Hornady Handbook of Cartridge Reloading</i> <i>Hornady Reloading Tools and Accessories</i>	Hornady Mfg. Co. Box 1848 Grand Island, NE 68801
<i>Sierra Bullets Reloading Manual</i>	Sierra 10532 Painter Avenue Santa Fe Springs, CA 90670
<i>Lyman Cast Bullet Handbook</i> <i>Lyman Shotshell Handbook</i> <i>Lyman Pistol and Revolver Handbook</i>	Lyman Products Middlefield, CT 06455
<i>Nosler Reloading Manual</i>	Nosler Bullets, Inc. P.O. Box 671 Bend, OR 97709
<i>How to Reload Shotshells and Why</i>	MEC 715 South Street Mayville, WI 53050
<i>Ponsness-Warren Catalog</i>	Ponsness-Warren Box 8 Rathdrum, ID 83858
<i>Handloaders' Digest</i> <i>ABC's of Reloading</i>	DBI Books 540 Frontage Road Northfield, IL 60093
<i>The Handbook of Shotshell Reloading</i>	SKR Industries, Inc. P.O. Box 1382 San Angelo, TX 76092
<i>Modern Reloading</i>	Lee Precision, Inc. 27 Highway "U" Hartford, WI 53027



Alliant Powder  
New River Energetics  
Route 114, P.O. Box 6  
Radford, VA 24143-0096

Visit our web site @ [www.alliantpowder.com](http://www.alliantpowder.com)

POSTED 6/13  
U.S. POSTAGE  
PAID  
RADFORD VA  
PERMIT NO. 50